Fortune Coin: a unifying E-commerce token with a nouveau fair value model reflecting its discounted cash-flow firm value

Abstract

This whitepaper serves to illustrate the key technical design philosophies behind Fortune Coin (FOC) — a novel utility token for e-commerce transactions. The first section introduces FOC and the objectives behind it. After which, section 2 covers the general benefits of a decentralised payment system for e-commerce transactions. The following sections then discuss the specific issues with traditional methods of transactions and how FOC solves them. Section 3 opens with a discussion on FOC's equity-based rewards model and evaluates its efficacy. Section 4 then discusses liquidity issues in traditional small-market-capitalisation cryptocurrencies and how FOC solves it by creating synergies in automated-traditional market making systems. Following, Section 5 outlines a few issues with valuation models for cryptocurrencies and its consequences on price volatility and momentum factors. The section then discusses the use of discounted cash flow valuation models for cryptocurrencies. However, this paper highlights that the market capitalisation of FOC is *not* dependent on Old Village Cafe's (the issuer of FOC) underlying value. It merely proposes that a company's implied equity value *can* be a proxy for the market capitalisation of cryptocurrencies. Under such a model, it provides a blended target fair value of $0.051 for FOC. The section also evaluates the benefits of such valuation methods such as lowering volatility and increasing price action predictability. Section 6 then describes the future roadmap for FOC.

Keywords: Cryptocurrency, Valuation, Discounted Cash-flow, E-commerce

1. Introduction

1.1 Goals and Objectives of FOC

Card network systems with hefty transaction fees are the prevalent ways of processing payment by traditional food and beverage industries. Under this model, such costs are often passed on to consumers or are discounted into the retailer's already thin margins. Even e-commerce goliaths with huge market power pander to the said payment processors; at the expense of consumers. Old Village Cafe (OVC), the initiator of Fortune Coin (FOC), seeks to revolutionise its digital payment through the use of blockchain technology. FOC is the preferred currency of payment by OVC, and enjoys quick validation and low transaction fees as it is built on the Ethereum network.

1.2 About Old Village Cafe

Tradition and innovation are at the core of OVC's vision. Since its humble inception in 2009, traditional peranakan recipes have been married with affordances of technological innovation. Online ordering, reservation and delivery services

were implemented early on as a way to stay competitive and increase efficiency.

In 2013, OVC pivoted from a traditional brick and mortar restaurant to a catering company that largely receives orders online. OVC has expanded their business operations from regional to islandwide delivery of box lunches, bento sets, and buffets.

Now, OVC is integrating blockchain technology into their traditional business model. The combination of food, e-commerce, and crypto financing, it aims to revolutionise the consumer-business relationship. Beyond the conventional transactions between a consumer and a caterer, the consumers are now investors as they are rewarded with the FOC tokens (more in Section 3). These FOC tokens can be both traded on the cryptocurrency exchange and used as a mode of payment.

The utility of FOC as both an investment medium and a form of payment offset enables OVC to build a global clientele base. Local consumers can enjoy lower transaction costs and rewards with FOC while global clients can participate in FOC trading.

As part of OVC's business innovation, the company is preparing to launch a series of locally produced plant-based meat products in Singapore (Appendix A). OVC will become the first local manufacturer and supplier of plant-based meat, providing the company an additional edge in the food industry. Holders of FOC can use the token to purchase these products globally.

This paper envisions FOC as the unifying coin that will be used in transactions to various merchants. OVC will launch its e-commerce website by late September 2021, which will enable vendors to list products on the site. Appendix B showcases the e-commerce website and its utility.

2. Benefits of cryptocurrency payment

The use of cryptocurrency has evolved quickly. Just a few years ago, it was but a token of exchange between gamers. Now, its technology powers logistical processes, and countries are even accepting it as legal tender. OVC's FOC sees the power of blockchain technology and is determined to revolutionise the food and beverage industry.

In the following subsections, the paper discusses the benefits of adopting FOC as a mode of payment. Mainly, it illustrates how FOC allows users and OVC to benefit from immutable transaction data, discounts on cost of goods sold due to network effects, and low cost of transactions.

2.1 Immutability of data

Transaction errors are costly to businesses. Mispayments, late payments and defaults often occur in medium sized businesses such as OVC due to poor cash flow management in some clients. To combat this, traditional businesses impose a risk premium on all its products to make margin.

However, blockchains easily solve this issue with its data validation protocols which are immutable in nature. This feature allows transactions to be recorded on a ledger, which cannot be altered, as well as being permanently embedded in the Ethereum blockchain. This prevents fraudulent transactions for both OVC and consumers, as both parties have secured proof of purchases.

The implementation of FOC will also decrease OVC's administrative costs. Less administrative hours would be required to balance ledgers and

follow up on payment. Immutability also allows OVC to provide greater transparency to our clients. OVC will be unable to refute any transaction history or default on its obligations. This paper expects savings in OVC, due to immutability, of up to 6% of its Sales, General and administrative costs.

2.2 Network effects

Cryptocurrency, like fiat currency, enjoys premiums from network effects. As the number of FOC users, holders and merchants increase, its fair value increases. The introduction of cryptocurrency acts as a catalyst to increase the company's own network effects (Giudici & Polinesi 2019). Such network effects can be enjoyed through a steady growth in OVC's consumers, and a reduction in marketing, and customer retention costs. The following subsections explore the areas where the benefits of network effects can be experienced.

2.2.1 Growth in consumers

Network effects are enjoyed by consumers when early incumbent investors promote FOC usage. The building of a larger community increases token value, and therefore, increases their capital gains. OVC leverages this network effect by integrating FOC into OVC's e-commerce site.

E-commerce in Singapore is projected to grow at a steady rate of 9.9% in revenue every year (Heysara, 2021). Catalysts such as the COVID-19 pandemic and the Singaporean government's push for digital literacy have propelled this growth. OVC leverages this rapid growth in market revenue with cryptocurrency integration with e-commerce.

Since FOC will be integrated as a mode of payment on the e-commerce website, there will be spillover effects from FOC investor growth into OVC's e-commerce business. We expect a 9.9% growth in OVC's e-commerce revenue.

Moreover, network effects can be capitalised through indirect effects. More users would encourage more merchants and, as a result, increase the total value of the value chain. OVC is committed to only listing reliable and reputable vendors. While the specifics of the vendors are confidential, OVC's e-commerce site will feature a wide range of quality products when fully launched.

2.2.2 Reduced marketing and customer retention costs

Marketing and customer retention costs often subsume a huge portion of an online retailer's profits. To lower costs, marketing synergies have to be developed and leveraged. OVC's range of products such as buffets, bento sets, and plant-based meats will be listed on the e-commerce site. The aggregation of various products will allow all products listed there to enjoy the synergistic marketing effects of an e-commerce site.

Moreover, utilising FOC as a unifying token for payment will promote lower customer retention costs. This is because the utility of FOC is tied to the ecosystem. Existing customers holding FOC would preferentially purchase products with FOC than use a different coin or fiat currency to transact in. This drastically reduces costs related to retention such as promotions, incentives, and instituting loyalty programmes. The paper expects 3% in cost savings due to reduced marketing and customer retention costs. As OVC scales, this percentage of savings can be expected to increase.

2.3 Lower cost of transaction

There are two main categories for the cost of cryptocurrency transactions: gas fees incurred from the Ethereum network, and the floating USDT exchange rate premium. The formula (1) of cost of transaction is approximated below (Wood, 2014). TX represents the transaction cost.

$$(1) \quad TX = \text{Gas units}(limit) \cdot (Base\ fee + Tip) + \text{USDT exchange rate premium}$$

While the gas fee was high prior to the london fork upgrade, the partial introduction of a proof-of-stake consensus has lowered fees and improved fees estimation. This implies that the cost of transaction would be significantly lower than network payment systems. While this transaction cost appears to be wholly passed onto the consumer, OVC offsets this cost by rewarding the consumer with a commensurate number of coins in absolute value. This system is further discussed in section 3 of the paper.

To further decrease transaction fees for consumers, OVC is developing its own native smartchain, FuChain. This will allow OVC to virtually negate the gas fees from ethereum, and provide competitive prices for its consumers. Section 6 describes this process in detail. The development of this native smartchain could lead to a reduction in long run transaction costs of up to 10%.

3. Inefficacy of existing reward systems

Traditional reward systems retain consumer's loyalty through fungible reward points. These points can be used to exchange for products or services. While it was thought to contribute to customer loyalty, Ching & Hayashi (2010) found that a removal of rewards incentives only marginally decreased patronage by 4 percentage points. Retailers have also pivoted away from these forms of incentives and launched cash back options to limited success. OVC envisions a more effective way of rewarding its consumers; via a neo-equity based rewards system.

3.1 FOC rewards system

This paper proposes the introduction of a neo-equity-based rewards programme for Fortune Coin (FOC). Instead of traditional equity rewards based programmes where loyal consumers are provided shares, OVC's neo-equity rewards system rewards consumers with FOC. FOC is awarded to the consumer at the commensurate absolute value as the value of the purchase (see figure 1)

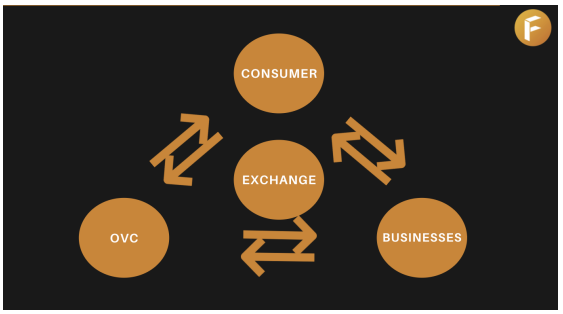

Figure 1: place holder, to finish diagram with words

For instance, a consumer's pre-tax purchase of 100 SGD would be rewarded with 100 FOC regardless of the prevailing market rate. Therefore, the rewards value would be indirectly affected by the chain value; which consumers are an active participant of.

Moreover, FOC is uniquely positioned as both an equity and currency. This provides the coin dynamic preferencing that's more resilient to shocks in consumer loyalties. The paper expects the introduction of an equity-based rewards rewards programme to lead to a 4% growth in the customer retention rate (Altinkemer & Ozcelik, 2009)

The use of FOC creates an ecosystem between

4. Supply, and liquidity management

A total of 1 Billion FOC tokens were being minted at inception, with 110 million tokens launched into market circulation. The tokens are built on the Ethereum network for versatility in exchange listings and access to decentralised applications (Dapps). FOC's smart contract is built on a proprietary token tool.

At Initial Coin Offering, FOC was sold at 0.01 USDT to an initial pool of investors. Each individual or corporation was entitled to only 100, 000 FOC, with free float tokens available to be purchased at the prevailing market price. Initial investors are also required to hold the tokens for 6 months, with the benefit of a flat interest rate of 10%.

The total supply as of ICO is listed in table 1 below.

Holder	Quantity	Quantity as %
Old Village Cafe	700,000,000 FOC	70%
EGIS	190,000,000 FOC	19%
Rewards holding	60,000,000 FOC	6%
Float	50,000,000 FOC	5%

Table 1: Breakdown of FOC holdings

To prevent downside volatility, Old Village Cafe and EGIS will also be locking up their tokens for 5 years.

4.1 Justification of token issuance

89% of the tokens are being held in treasury reserves as a way to manage liquidity and regulate inflationary price pressure. Tokens will be progressively released to the market at the token's weekly growth rate so as to promote an efficient market and discourage huge upside shocks in the market. The rate at which tokens will be sold into the exchange is calculated using a weighted growth rate formula as described in the next few subsections.

4.1.1 Calculation of exponential moving average

To calculate the exponential moving average (EMA), a smoothing factor has to first be calculated using formula (2).

$$(2) \quad \mathrm{S} = \frac{2}{1+\mathrm{N}}$$

N represents the selected time period. FOC uses a 7 day period to determine its prices. The smoothing factor, S, is then used in formula (3). This paper has chosen an exponential moving average to calculate the average price in order to provide a higher weight to more recent prices.

$$(3) \quad \mathrm{EMA}_{t1} = \left[\mathrm{Value}_{t1} \cdot \left(\frac{\mathrm{S}}{1+\mathrm{N}}\right)\right] + \left\{\mathrm{EMA}_{t1-1} \cdot \left[1 - \left(\frac{\mathrm{S}}{1+\mathrm{N}}\right)\right]\right\}$$

The first term, EMA_{t1} refers to the exponential moving average price of FOC at time $t1$, while $\mathrm{EMA}_{t1\text{-}1}$ refers to the exponential moving average price the day before. Value_{t} is the value of FOC at time *t*.

After computing the EMA_{t1} the returns of FOC, using a fixed-period EMA, can be ascertained with the simple growth rate formula (4).

$$(4) \quad e = \frac{\mathrm{EMA}_{t1} - \mathrm{EMA}_{t1+7}}{\mathrm{EMA}_{t1}}$$

The returns, e is calculated with the simple growth rate formula, as above. EMA of 7 days apart are used to determine the growth rate.

4.1.2 Calculation of volume growth rate

FOC's growth in volume is calculated using a simple growth formula, with a simple volume moving average (VMA) as shown in (5).

$$(5) \quad v = \frac{\sum_{n=i}^{j} V_n - \sum_{n=i+7}^{j+7} V_n}{\sum_{n=i}^{j} V_n}$$

V is the volume at time period n, with i and j representing the days. j and i represent a time

period of 7 days. v is the growth rate of volume across the volume moving average VMA of the first week and the VMA of the second week.

4.1.2 Weighted average growth rate

A weighted average growth rate is being introduced in order to consider both volume and price growth. In the early stages of launch, a 70% weightage is attributed to *v*, the growth in volume moving average. This allows liquidity to be more informed by volume than price; which is indirectly attributed to volume.

The weighted average growth rate of FOC for the month of August was 26%.

4.2 Liquidity management on Exchange

As of publication, FOC is only listed on UNISWAP and Kirin exchange due to the high maintenance fees associated with listing. However, the unique combination of liquidity pool, automated market making (UNISWAP) and traditional order book market making systems (Kirin exchange) decrease the illiquidity risk premium. Pooled liquidity lowers the overall liquidity risk, while traditional market-making exchanges allow for retail investors' intuitive technical analysis strategies.

UNISWAP is also chosen as a way to minimise retail-initiated arbitrage between the various exchanges. The pairing of FOC/ETH on UNISWAP necessitates a 3 point arbitrage, which would decrease scraping; thereby minimising draining of investor value.

5. Valuation of cryptocurrencies

Cryptocurrencies experience one of the highest volatilities across any asset class (Naimy et. al, 2021). Token-specific risk is also often undiversifiable as its returns are related to its underlying on-chain value (Stober & Sander, 2020). Moreover, since cryptocurrency is predominantly saturated with retail traders, the market often over reacts to information (Bogards, & Czudaj 2021). This section presents that a firm's implied equity value can be a proxy for the token's market capitalisation. However, this paper notes that FOC's price is not dependent on the underlying value of OVC.

5.1 Problems with existing cryptocurrency valuation methods

One of the central discussions around cryptocurrencies is its price discovery mechanism. Longchamp et al. (2020) suggests the usage of network effects, immutability, monetary policy and currency type as a measure of a cryptocurrency's fair value. This method of valuation considers key factors which affect cryptocurrency prices. However, the model's fair value is significantly lower than the market price. This paper proposes that the addition of momentum factors and hash rates would more accurately model for cryptocurrency prices. Moreover, the current approach relies on currency value, which is difficult to quantify. Network effects are also deeply complicated with many different direct and indirect network users. Therefore, a more robust approximation of network effects which includes the chain value as modelled in Stober & Sander (2020) could be used.

Other valuation models rely on the traditional Capital Asset Pricing Models (CAPM) which utilise the computation of a cryptocurrency market index (Nadler & Guo, 2019). Such CAPM models are versatile and convenient in implementing factor loadings. Moreover, price valuations reasonably reflect market prices. However, the increasingly diversified cryptocurrency market presents its own industry-specific risk premia which are prone to on-chain shocks in the market. Such risk factors are

difficult to quantify and may not accurately portray the fair value of the cryptocurrency. Moreover, such a model assumes the diversifiability of unsystematic risk. However, small to medium market capitalisation assets may require huge amounts of funds to be diversified away.

Therefore, to address the above issues, this whitepaper proposes that the implied equity value of a firm can be a proxy for the market capitalisation of cryptocurrencies.

5.2 Discounted cash flows - Perpetuity Growth

The fair market value of discounted cash flows can be calculated using the formula below (6). This model assumes equal period accounting.

$$\text{Value} = \left[\sum_{n=i}^{j} \frac{\text{CF}_n}{(1+r)^n}\right] + \frac{\text{TV}_n}{(1+r)^j} \quad (6)$$

The term CF represents the cash flow of a company, with r representing the discount rate, which will be the firm's weighted average cost of capital. Period i is the starting period of account, with j being the terminal period. Finally, TV represents the terminal value of cash flows. The value calculated here refers to the enterprise value. Therefore, debt will have to be subtracted and cash will have to be added to derive the implied equity value.

To quantify the discounted cash flow model, the financials of OVC will be used as an example to calculate the implied equity value of FOC.

5.2.1 Weighted average cost of capital

The weighted average cost of capital is used as the appropriate discount rate for our cash flow analysis. The weighted average cost of capital is found using the formula shown below.

$$\text{WACC} = \frac{\text{E} \cdot r_e}{\text{E}+\text{D}} + \frac{\text{D} \cdot r_d}{\text{E}+\text{D}} \quad (7)$$

E represents the total market equity, while D represents the total market value of debt. r_e represents the cost of equity while r_d represents the cost of debt.

Firstly, the cost of equity is being calculated using a capital asset pricing model (8).

$$r_e = r_f + \beta(r_m - r_f) \quad (8)$$

r_f represents the risk free rate. The paper used the Singapore 10 year treasury bond yield as a proxy for risk-free rate. The yield, as published by the Monetary Authority of Singapore (2021) is 1.39%. β represents the systematic risk of the catering industry. As OVC is not listed, β is approximated to be 0.51. It is calculated using a weighted average of regional catering companies' unsystematic risk. Lastly, r_m represents the expected return of the market, which is estimated to be 6.01% (Damodaran, 2021)

The capital structures of OVC have allowed it to be exempted from tax. Earnings are actively reinvested back into the company to stimulate growth. Therefore, the cost of debt is the weighted average interest rate of all its liabilities. The paper has found this to be approximately 3.9%.

With the above figures, we estimate the WACC to be 4.54%.

Weighted average cost of capital	
Industry Beta	0.51000
Risk free rate	1.3900%
Estimated return of market	6.1100%
Market risk premium	4.7200%
Cost of equity	3.7972%
Cost of debt	3.9000%
WACC	**4.5383%**

Table 2: Breakdown of OVC's WACC

Thereafter, revenue was projected at its WACC. Appendix C showcases the expected discounted cash flow from 2021 to 2025. List of projections and explanations are also provided in Appendix C.

By projecting the discounted cash flow model, we arrive at a total implied equity value of $87,990,259.74. To derive the implied token price, the total equity value is divided by the 1,000,000,000 FOC minted at ICO. We arrive at an implied fair value of $0.0880. As of writing, the one month moving average price of FOC was $0.024 (see Appendix D). With the discounted cash flow model, it suggests an upside potential of 266.63%.

5.2 Discounted cash flows - Exit Multiple

To propose a valuation with the exit multiple method, a discounted earnings before interest, taxes, depreciation and amortization (EBITDA) will have to be calculated.

$$\text{EBITDA} = \text{NI} + \text{I} + \text{T}_c + \text{D} + \text{A} \tag{9}$$

NI represents the net income, I represents the interest expense, T_c represents the corporate tax rate, D represents depreciation, and A represents amortization. The Enterprise value using the Exit Multiple method follows formula (10) below.

$$\text{Value} = \left[\sum_{n=i}^{j} \frac{\text{CF}_n}{(1+r)^n}\right] + \frac{\text{TVE}_n}{(1+r)^j} \tag{10}$$

TVE represents the terminal value using terminal quarter EBITDA. After calculating the enterprise value, the implied equity value was found by subtracting the debt and adding cash. The implied equity value was found to be $72,048,052.14 with an implied fair value of $0.072 (see Appendix E). With a one month moving average of $0.024, the potential upside is 200.20%.

TVE is computed with the formula below.

$$\text{TVE} = \text{Exit Multiple} \cdot \text{EBITDA}_\text{T} \tag{11}$$

In formula (11), EBITDA_T refers to the terminal period EBITDA.

5.3 Discounted cash flows - Blended target price

Using the two valuation methods, a blended target price is then calculated using formula (11).

$$\frac{\sum_{n=l}^{m} p_n}{k} \tag{12}$$

The formula above describes the weighted price formula of the two valuation methods. l represents the first fair value, with m being the last fair value being calculated. k represents the total number of fair values being calculated. Using formula 11, the estimated blended target price is $0.080. This represents a 233.41% upside.

5.3 Sensitivity analysis

A bivariate sensitivity analysis was then performed to visualise the effect of WACC and terminal growth rate on the price of FOC. This model uses the perpetuity growth rate model.

		WACC				
		3.54%	4.04%	4.54%	5.04%	5.54%
Perpetuity growth	0.54%	0.07060	0.06896	0.06736	0.06581	0.06430
	1.04%	0.07988	0.07801	0.07620	0.07444	0.07273
	1.54%	0.09225	0.09009	0.08799	0.08595	0.08397
	2.04%	0.10956	0.10699	0.10450	0.10207	0.09971
	2.54%	0.13555	0.13236	0.12926	0.12625	0.12332

Table 3: Bivariate sensitivity analysis for WACC and terminal growth rate

The table above presents the possible target values of FOC based on various WACC and terminal growth rates. The values have a standard deviation of 0.0227, a high of $0.135 and a low of $0.0643.

Another sensitivity analysis was performed using the exit multiple model. This model was based on WACC and terminal growth rate analysis.

		WACC				
		3.54%	4.04%	4.54%	5.04%	5.54%
Exit Multiple	3.854048891	0.04649	0.04660	0.04660	0.04649	0.04627
	3.859048891	0.04644	0.04655	0.04655	0.04644	0.04622
	3.864048891	0.04644	0.04655	0.04655	0.04644	0.04622
	3.869048891	0.04649	0.04660	0.04660	0.04649	0.04627
	3.874048891	0.04660	0.04671	0.04671	0.04660	0.04638

Table 4: Bivariate sensitivity analysis for WACC and exit multiple (0.005 stepped)

The table above presents the possible target values of FOC based on various WACC and exit multiples. The exit multiples are stepped at intervals of 0.005. At this level of stepped exit multiples, the values have a standard deviation of 0.000135, a high of $0.0467 and a low of $0.0462. A higher WACC decreases FOC's fair value, while a moderate WACC optimises its fair value.

However, at larger steps of exit multiples (stepped at 0.5), the impact of exit multiples are more prominent.

Table 4: Bivariate sensitivity analysis for WACC and exit multiple (0.5 stepped)

A higher exit multiple—implying a higher enterprise value—would increase the fair value of FOC. The values have a standard deviation of 0.00591, a high of $0.04671 and a low of $0.03051.

OVC's goals are consistent with the sensitivity analysis. OVC strives to decrease its cost of capital while increasing its growth rate through innovative ideas such as the adoption of blockchain technology.

5.3 Replicability of discount rate method

The central issue behind the use of discounted cash flows as a measure of a cryptocurrency's value is that institutions that mint the coins or tokens are often startups which do not release their annual reports. Without such reports, it is difficult to accurately ascertain the implied equity value of the institution. However, a reasonable proxy for net income could be approximated using the formula (13) as shown below.

$$\text{NI} = \text{G} + \text{C}_\text{g} + \text{I} - (\text{U} + \text{SGA} + \text{T}_c) \quad (13)$$

NI represents the net income of the foundation, while G represents the profit from gas fees. C_g represents the capital gains from the sale of tokens, and I represents income from investors. U represents the utilities expense, specifically electricity. An approximate price of electricity specific to the region was used in this paper. SGA represents the expense from sales, general and administration. Lastly, T_c represents the corporate tax, and or capital gains tax.

To determine the repeatability and significance of the discounted cash flow method, the one year moving average prices of the top 100 cryptocurrencies by market capitalisation were being compiled and regressed against the implied token value. A 24% momentum premium was added into the implied token value to normalise the data. A one year volume moving average and one year volatility were also included in the multi-linear regression model to adjust for these factors.

Regression values show that implied token prices are loaded significantly (*t*-statistic 2.87) against market prices at a 10% significance level. Appendix F describes the methodology in further detail.

5.4 Future research

Future research could look more into the discount rate, *r*. A possible liquidity premium could be factored into the cost of equity in order to more accurately reflect liquidity risk..

$$\text{Illiquidity}_t^{\text{FOC}} = \frac{1}{D}\sum_{t=1}^{D}\frac{|R_t^{\text{FOC}}|}{P_t^i V_t^i}$$

6. Roadmap

OVC believes that FOC holds great developmental potential. Besides the utility of FOC as a tool to increase consumer loyalty, OVC will further develop the OVC e-commerce site (see Appendix G.). The launch of OVC's E-commerce site is envisioned to create an eco-system where consumers can easily purchase products, earn/spend FOC as rewards, and serve as an electronic-wallet for FOC tokens. Moreover, OVC will also partner with other merchants that will participate in listing their products and be adopters of FOC. Traditional businesses will benefit from a more robust reward system offered to their consumers while consumers can benefit from having more products to choose from.

To further reduce the cost for consumers, OVC will be launching its own native smartchain named Fuchain. Launching OVC's own smartchain will allow OVC to be insulated from external gas fee shocks, and cyber attacks on Ethereum-based decentralised applications. Such dissociation from the Ethereum ecosystem will also allow OVC to be independent of the health of Ethereum's chain value. E-commerce transactions and applications can also be more efficiently integrated onto the blockchain. This would improve the user experience and increase Fuchain's chain value. Businesses using Fuchain would also enjoy quicker transaction speeds due to lower congestion on the chain.

Appendix A

New food offerings such as a nonya buffet, and executive Korean set meal will be made available to appeal to a larger spectrum of audiences

Image 1: New offerings such as a premium Nonya buffet

Image 2: New offerings such as an executive Korean bento set meal

Under a subsidiary brand, Fu Man Man, plant based meat products will also be made available.

Image 3: Plant based meat products

Appendix B

Appendix C

Revenues are projected to increase from 2023 at a 9.9% growth rate as per Singapore's e-commerce revenue growth rate. 2022 is expected to experience a 39% growth rate due to the launch and full implementation of OVC's e-commerce website.

Cost of goods sold (COGS) are expected to increase at a decreasing rate. COGS have an average cost of 30% of revenue. This paper expects OVC to enjoy premiums due to economies of scale, therefore the paper expects OVC's COGS as a percentage of revenue to decrease at a rate of 1%.

Investment into FOC and projects of OVC is expected to reach a critical mass of $600,000 as is typical for projects of this size. The paper estimates figures based on the current investor growth rate and extrapolates it to 2025.

Tax is expected to be incurred by OVC in 2022. Therefore, a new WACC is being used to estimate the discount rate.

	2018	2019	2020	2021 (est)	2022 (est)	2023 (est)	2024 (est)	2025 (est)	notes
Revenue	$947,596.00	$898,455.00	$959,809.00	$1,055,789.90	$1,573,126.95	$1,728,866.52	$1,900,024.30	$2,088,126.71	
									39.9% increase in revenue in first year of e-commerce, 9.9% growth thereafter
growth multiple				1.10	1.4900	1.0990	1.0990	1.0990	
COGS	-$359,931.00	-$269,563.00	$284,257.00	$306,179.07	$440,475.55	$466,793.96	$494,006.32	$522,031.68	
growth multiple				29.00%	28.00%	27.00%	26.00%	25.00%	Declining COGS at 30%
Gross profit	**$587,665.00**	**$628,892.00**	$675,552.00	$749,610.83	$1,132,651.40	$1,262,072.56	$1,406,017.99	$1,566,095.03	
Other income	**$9,706.00**	**$14,081.00**	$33,113.00	$165,565.00	$304,028.03	$448,774.89	$600,090.75	$758,273.74	
FOC investment				$132,452.00	$138,463.03	$144,746.86	$151,315.86	$158,182.99	
Expense									
Admin and othe roperating expenses	-$578,832.00	-$600,612.00	-$800,542.00	-$633,473.94	-$943,876.17	-$1,037,319.91	-$1,140,014.58	-$1,252,876.03	
Finance costs	-$16,160.00	-$11,369.00	-$11,387.00	-$11,903.77	-$12,444.00	-$13,008.74	-$13,599.11	-$14,216.28	
P/L (pre-tax)	$2,379.00	$30,992.00	-$103,264.00	$269,798.12	$480,359.27	$660,518.80	$852,495.04	$1,057,276.47	
Tax expense (17%)				$45,865.68	$81,661.08	$112,288.20	$144,924.16	$179,737.00	
P/L (after-tax)	$2,379.00	$30,992.00	-$103,264.00	$223,932.44	$398,698.19	$548,230.60	$707,570.89	$877,539.47	

Figure xx: projected income statement for OVC

Depreciation of plant, property and equipment (PPE) are expected to rise at WACC. The increase in depreciation from 2020 to 2021 is due to the newly renovated freezers which incur a $200,000 cost, with a 10 year straight line depreciation.

	2018	2019	2020	2021 (est)	2022 (est)	2023 (est)	2024 (est)	2025 (est)	Notes
Cash Flows from operating activities									
Profit/(Loss) before tax	$2,379.00	$30,992.00	-$103,264.00	$223,932.44	$398,698.19	$548,230.60	$707,570.89	$877,539.47	
Depreciation of PPE	$90,126.00	$43,519.00	$22,370.00	$67,558.65	$70,624.65	$73,829.79	$77,180.38	$80,683.04	straight line 10 year dep of 200k freezers
Interest expense	$14,576.00	$10,035.00	$10,436.00	$10,909.61	$11,404.72	$11,922.30	$12,463.37	$13,028.99	interest on tenured loan
	$107,081.00	$84,546.00	-$70,458.00	$302,400.70	$480,727.56	$633,982.69	$797,214.63	$971,251.50	
Change in Working capital									
Other payables	-$5,091.00	$12,311.00	-$2,050.00						
Cash generated from operations	**$101,990.00**	**$96,857.00**	**-$72,508.00**	$302,400.70	$480,727.56	$633,982.69	$797,214.63	$971,251.50	
Net cash generated from operating activities	**$101,990.00**	**$96,857.00**	-$72,508.00	$302,400.70	$480,727.56	$633,982.69	$797,214.63	$971,251.50	
Cash flows from investing activities									
Acquisition of PPE	-$299.00	-	-						
Net cash used in investing activties	**-$899.00**	-	-						
Cash flows from financing activities									
Interest paid	-$14,576.00	-$10,035.00	-$10,436.00	-$10,909.61	-$11,404.72	-$11,922.30	-$12,463.37	-$13,028.99	
Proceeds from term loan	-	-							
Other payables due to a director	$25,708.00	$29,425.00	$199,900.00	$208,972.00	$218,455.72	$228,369.83	$238,733.88	$249,568.27	at WACC
Repayment of term loan	-$127,104.00	-$102,573.00	-$78,347.00	-$98,347.00	-$98,347.00	-$98,347.00	-$98,347.00	-$98,347.00	
Net cash used in financing activties	**-$115,972.00**	**-$83,183.00**	$111,117.00	$99,715.39	$108,704.00	$118,100.54	$127,923.51	$138,192.28	
Net increase used in financing activities	**-$14,881.00**	**$13,673.00**	$38,609.00	$402,116.09	$589,431.56	$752,083.22	$925,138.15	$1,109,443.78	
Cash and cash equivakents, begining balance	**$38,469.00**	**$23,588.00**	$37,261.00	$75,870.00	$477,986.09	$1,067,417.65	$1,819,500.87	$2,744,639.02	
Cash and Cash equivalents, Ending Balance	**$23,588.00**	**$37,261.00**	$75,870.00	$477,986.09	$1,067,417.65	$1,819,500.87	$2,744,639.02	$3,854,082.80	
Period Factor				1	2	3	4	5	
Discounted Free Cash Flows				$457,235.50	$976,750.75	$1,592,671.93	$2,298,179.66	$3,087,055.72	
EBITDA	$107,081.00	$84,546.00	-$70,458.00	$302,400.70	$480,727.56	$633,982.69	$797,214.63	$971,251.50	

Figure xx: projected cash flow statement for OVC

Appendix D

Perpetuity Growth Method		
Total PV of Projected FCFF		**8,411,893.56**
	Long-term growth rate	1.54%
	Final Year FCFF	2,953,038.81
	Terminal Value	100,008,146.56
PV of terminal value		**80,104,849.18**
Enterprise Value		**88,516,742.74**
	Less: Debt	-566,934.00
	Add: Cash	40,451.00
Implied Equity Value		**87,990,259.74**
	NOSH	1,000,000,000
Implied Token Price		**$0.0880**
1MA Share Price		$0.0240
Upside		266.63%
Implied Exit EV/EBITDA		2.435347179

Figure xx: Implied token price using perpetuity growth method

Appendix E

Exit Multiple Method		
Total PV of Projected FCFF		**8,411,893.56**
	Terminal Quarter EBITDA	32,892,578.87
	Exit EV/EBITDA	2.435347179
	Terminal Value	80,104,849.18
PV of terminal value		64,162,641.58
Enterprise Value		72,574,535.14
	Less: Debt	-566,934.00
	Add: Cash	40,451.00
Implied equity value		72,048,052.14
	NOSH ('000)	1,000,000,000
Implied stock price		$0.072
1MA Share Price		$0.0240
Upside		200.20%
Implied Perpetual Growth Rate		5.03%

Figure xx: Implied token price using exit multiple method

Appendix F

The historical weekly prices of the top 20 cryptocurrencies were compiled using an API connector

Appendix G

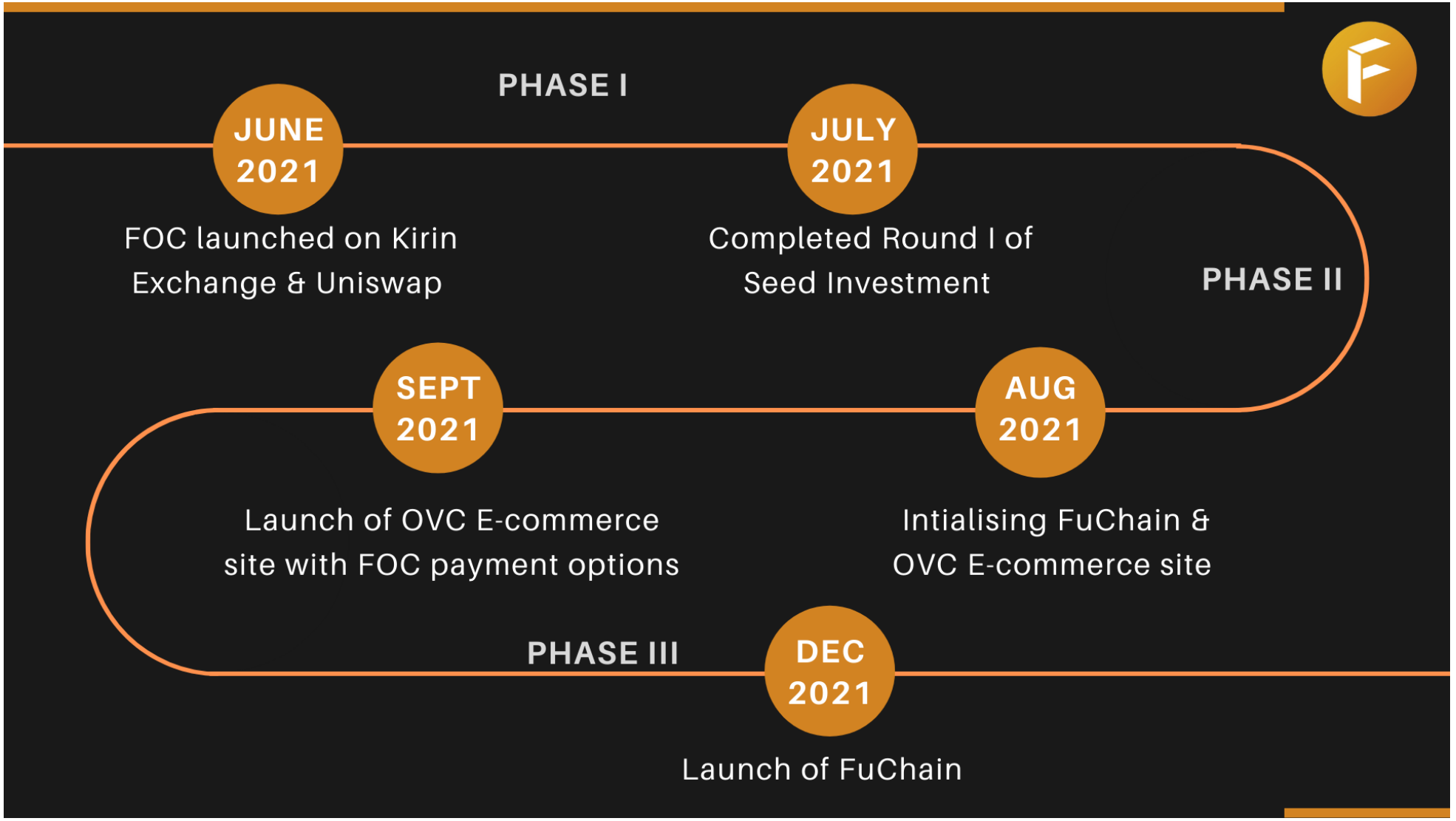

Figure 1: Development Timeline of FOC

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