

FastBio Pay



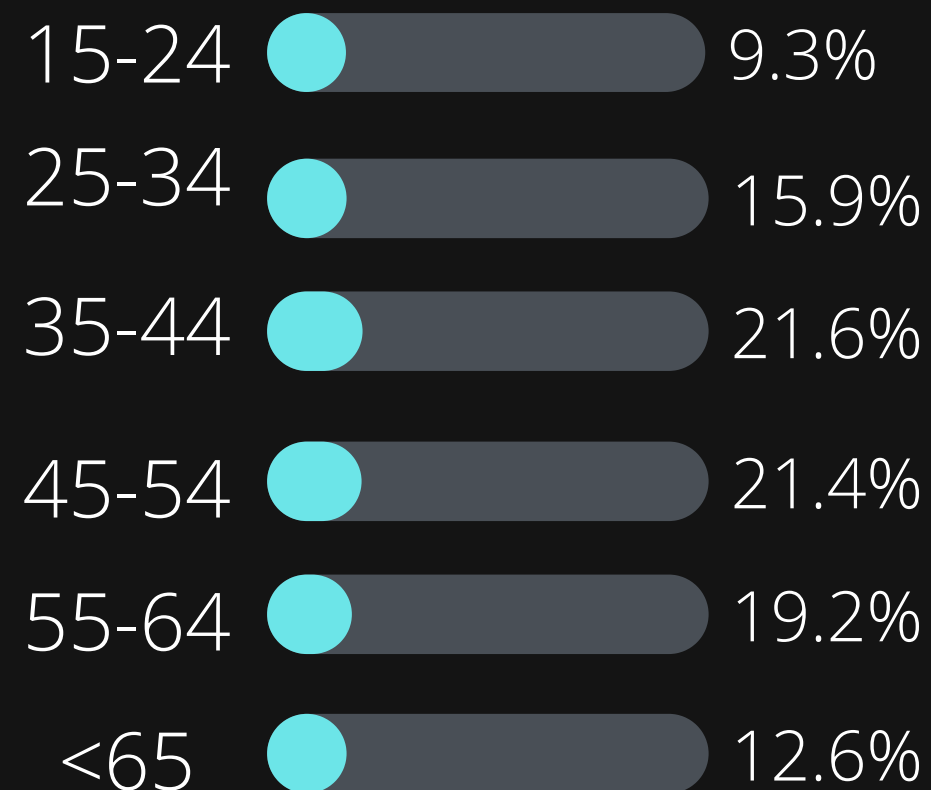
CEO - Xin Yen Chai z5284705
CTO - Skye Tao z5285195
CMO - Wendy Dai z5285204
CFO - Shuwen Mai z5213023
COO - Kailin Wang z5313400



Problem

PAYMENT SECURITY ISSUES

Card Fraud Age Distribution

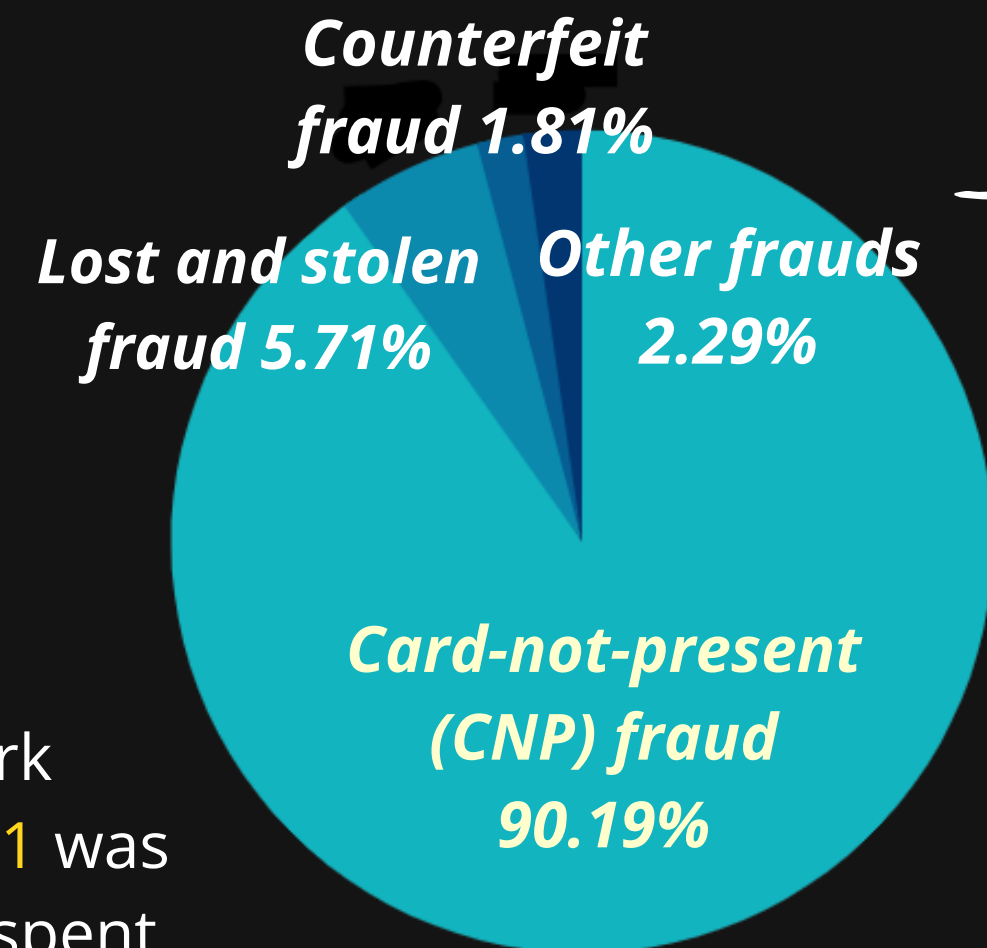


As we can see the age distribution of card fraud is evenly spreaded throughout the age segments while the **35-44** and **45-54** groups are most likely to have experienced card fraud as they are the ones who have highest financial resources and the largest segment to employ financial services. Therefore, it is

crucial to strengthen the payment process to avoid money earned from their handwork being stolen. According to the Australian Payment Network, the **card fraud rate in 2021** was **57.8% per \$1000**, implying that Australians would lose an average of \$578 per \$1,000 spent which is a relatively high portion of payment fraud that threatens individuals' properties.

(Australian Bureau of Statistics 2022) & (Australian Payment Network 2021) & (Flnder 2022)

As technologies evolves rapidly, criminals tends to leverage this advantage for illegal acts. Just within 2021, there is an **9.2% increase** of the overall credit card fraud in Australia that totalled up to **\$490.1 million**. While CNP fraud accounts for **90.19%** of the total payment fraud, the Australian government, businesses and individuals should remain vigilant about what they click online and seek ways to prevent the leakage of sensitive card information. Since these criminals are difficult to track as the payment system fails to recognize cardholders' true identities and does so quickly, their success often encourages this unhealthy trend in society and increases payment fraud in the future.

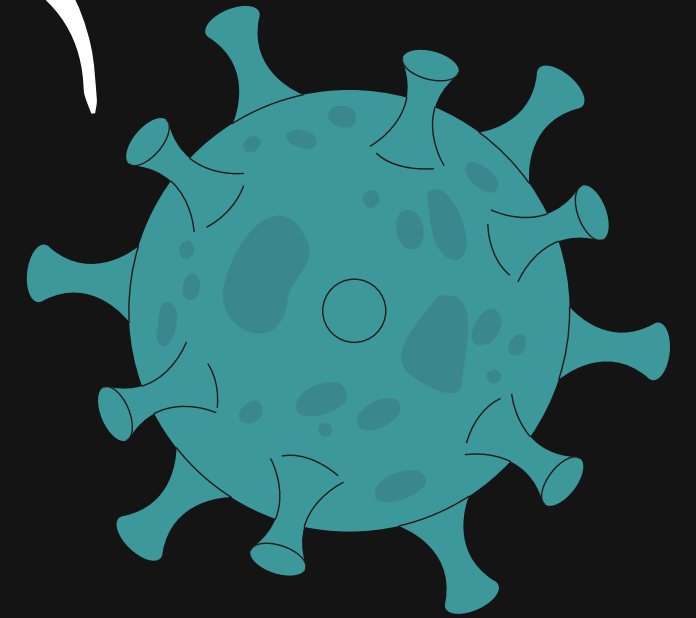


Types of Card Fraud Distribution

Why Payment Security?



As online shopping increases, payment fraud would be worsen and there is a surge need to strengthen payment security to protect citizens' wealth and impedes cybercrimes



Online Shopping Preferences

According to the Global Web Index (GWI) report released in August 2021, it indicates that **over 60% of the millennials and Gen Zs** who aged between 23-37 years of age, while the other generations also prefer online shopping nowadays because of the **greater deal and convenience**.

(Cartwright 2021) & (Statista 2020)

Covid-19 Impacts

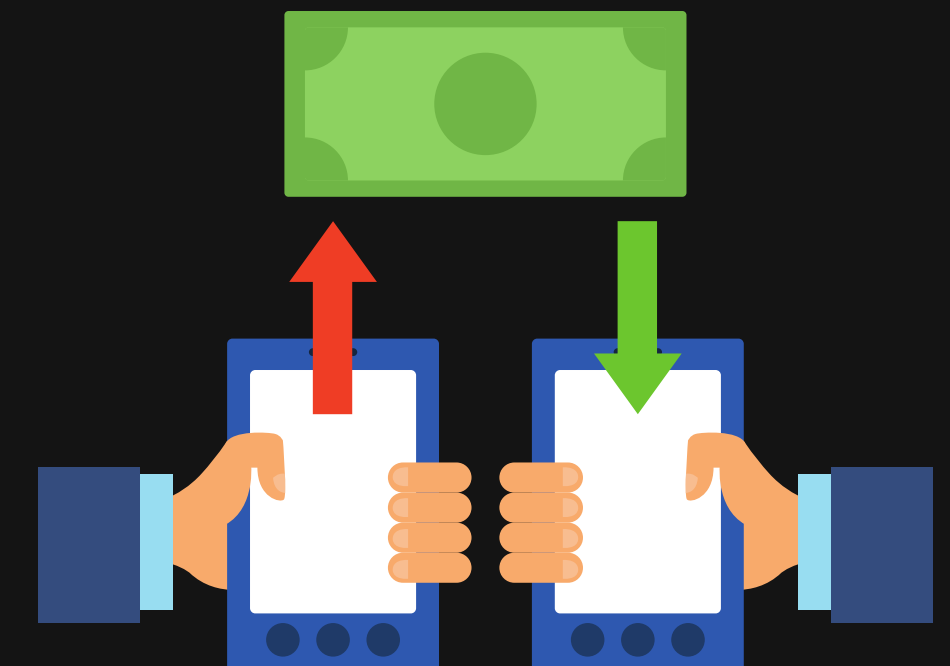
Due to the severe strike of pandemic, **around 2.5 million Australians shopped online** for the first time. More people are forced to stay at home during **lockdowns** or trying to keep the **social distance** that not as many people prefer offline shopping, which **escalates online shopping** but also **the risk of payment fraud or identity theft** via hacking or unsecured websites to obtain others' confidential card details online.

Solution



FastBio Pay aims to secure the payment processes through a combination of biometrics recognitions in Australia. FastBio Pay users would no longer have to worry about confidential card details being leaked or online stalking because it has biometrics features necessary for payment authorizations. This provides a double payment safety gate from both the users and FastBio Pay's ends to prevent future cybercrimes.

Once FastBio Pay has detected a non-existing users' biometrics, the associated account will be locked immediately and inform the true user promptly. Thus, FastBio Pay delivers a sense of security to customers and safe payment environment from its advanced technologies used and sophisticated procedures for fraud detection.



Product



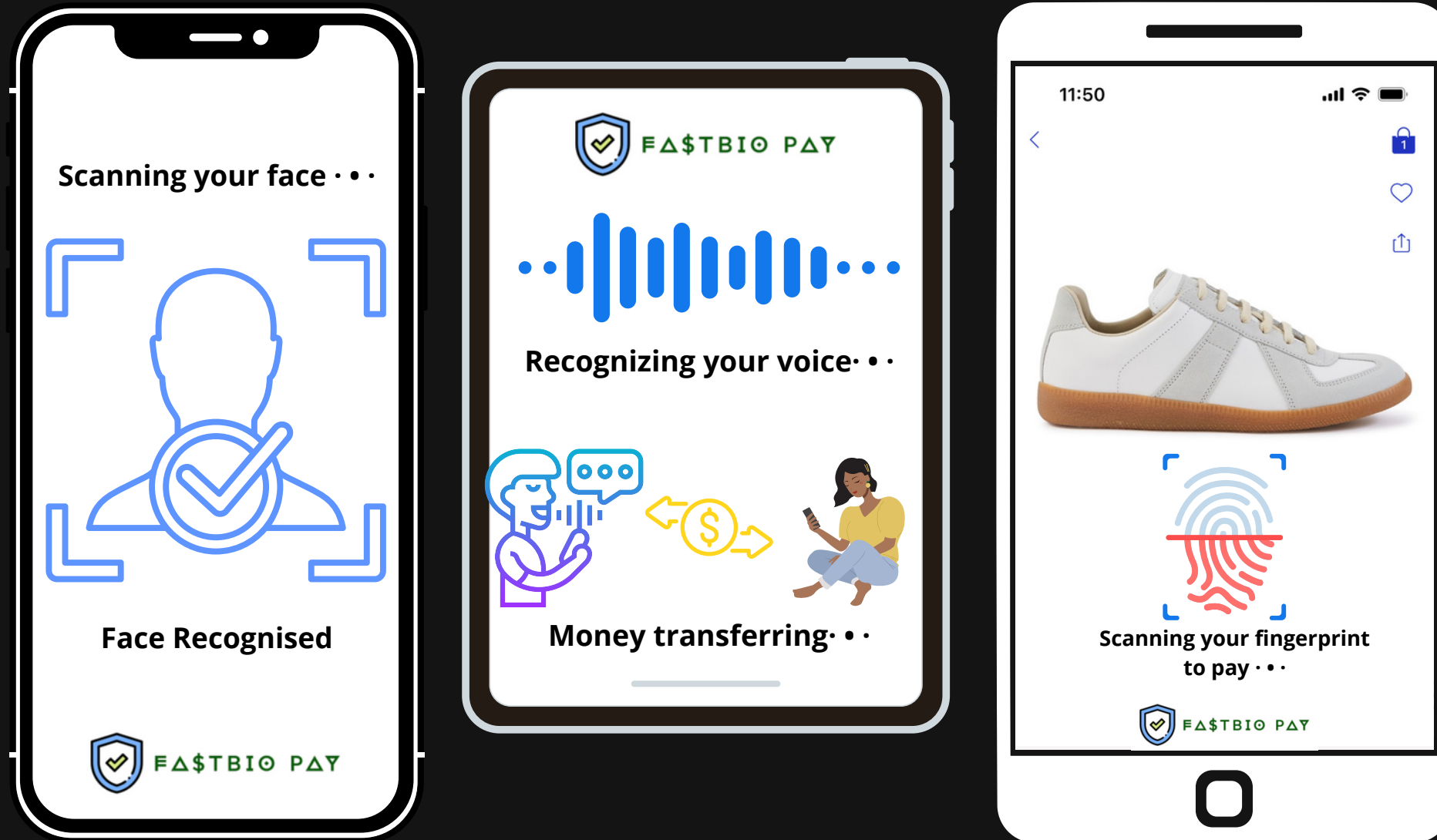
FastBio Pay is a flexible & customized payment app that it partners with the major banks for users to bump their money into FastBio Pay or attach their credit cards onto the app for future payment transactions. To mitigate the risks of identity theft and card-not-present fraud, FastBio Pay tackles this issue by integrating a combination of various biometric recognitions payment methods such as facial, voice, fingerprint and finger-vein.

We also enable our system to collect users' biometric identities and store in an encrypted database for:

- (1) the real users' biometrics recognitions as individuals' biometrics can barely be imitated, it dispels fraudsters' initiatives to commit cybercrimes while these recognitions are fast and easy to use, especially for those busy and forgetful ones, during payment authorization.
- (2) fake user detection if the fraudster exploits FastBio Pay users' account as the system has stored each user's biometrics during registrations.

*Regarding the cybersecurity issues, we will buy cloud data storage service from google.

3 Basic Recognitions

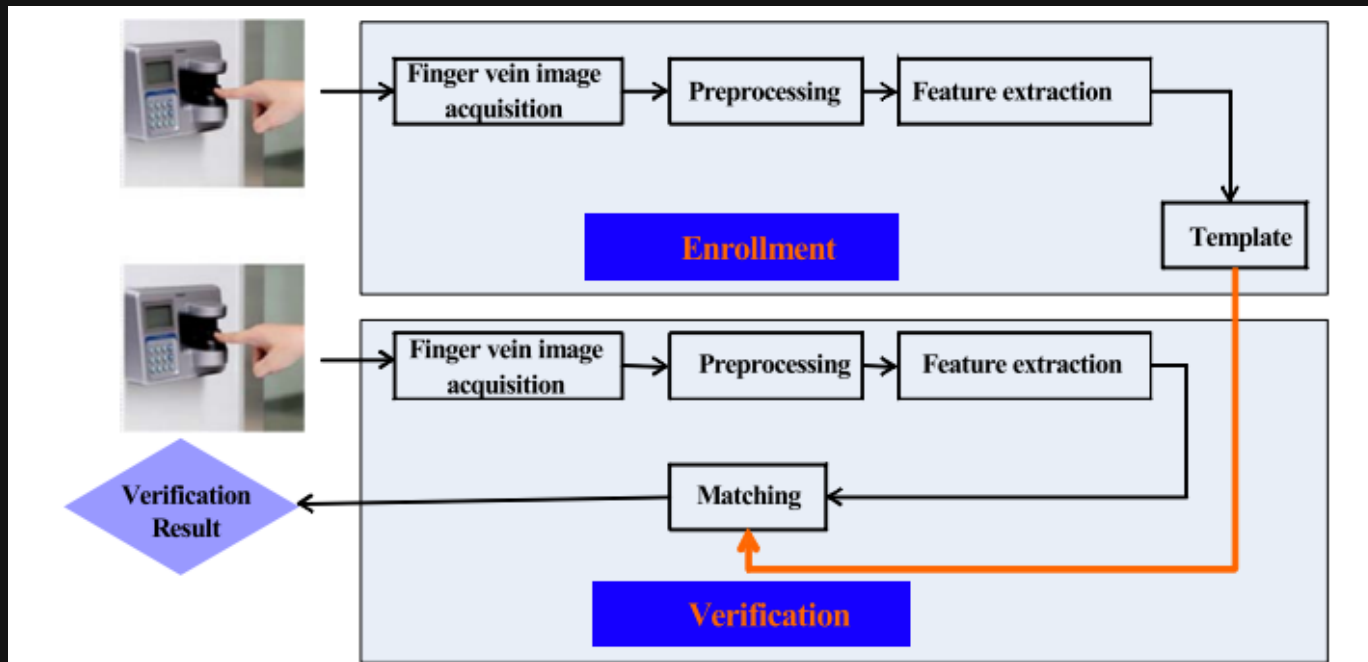


Once the user has provided their voice recognition information, they have an option to enable the voice transfer function. If the transfer recipient is also one of our users, once they become app friends, the user simply needs to say: 'Please transfer my money to xxx (the transfer recipient's real name)' and the system will perform a face scan or fingerprint recognition to confirm the transfer operation.

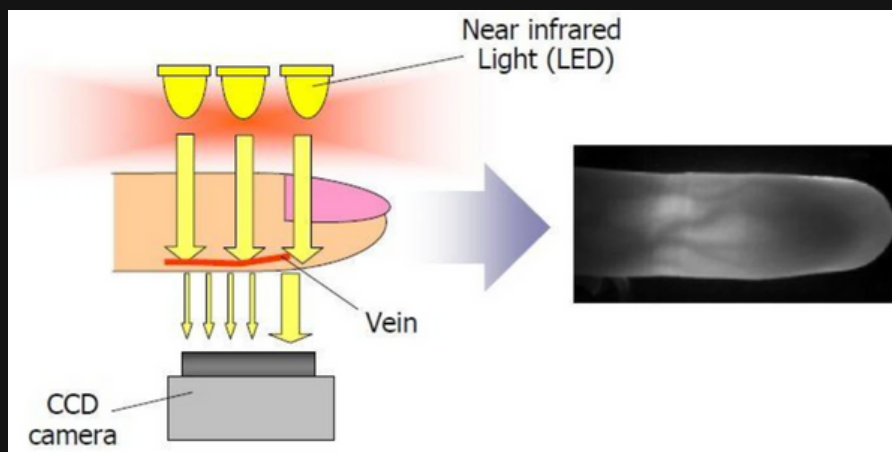
Facial, voice and fingerprint recognition are the basic biometric recognition payment methods in the FastBio Pay app. Users who would like to use this app need to register an account through real-name authentication first. Once the account has been created, they need to bind their bank cards and then input their biometric information by selecting two or more of the above three approaches. Information will be included and uploaded to the database by FastBio Pay instantaneously.

After that, users could choose the identification method they have already uploaded to make online shopping payments. Additionally, FastBio Pay will work with some offline merchants to provide instruments that support users to pay using their face, voice, or fingerprint.

Finger-vein Recognition



[https://www.sciencedirect-com.wwwproxy1.library.unsw.edu.au/science/article/pii/S0031320316303521](https://www.sciencedirect.com/wwwproxy1.library.unsw.edu.au/science/article/pii/S0031320316303521)



HITACHI

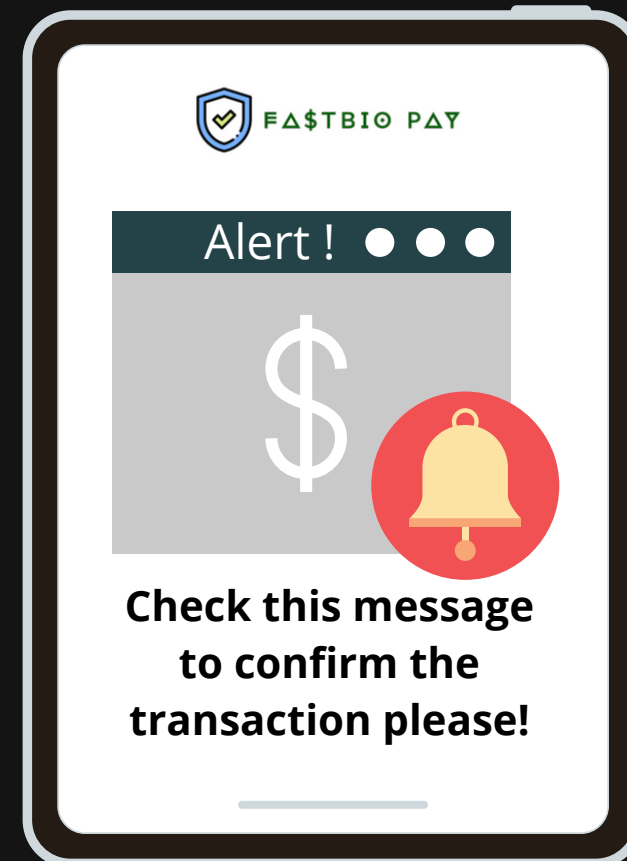
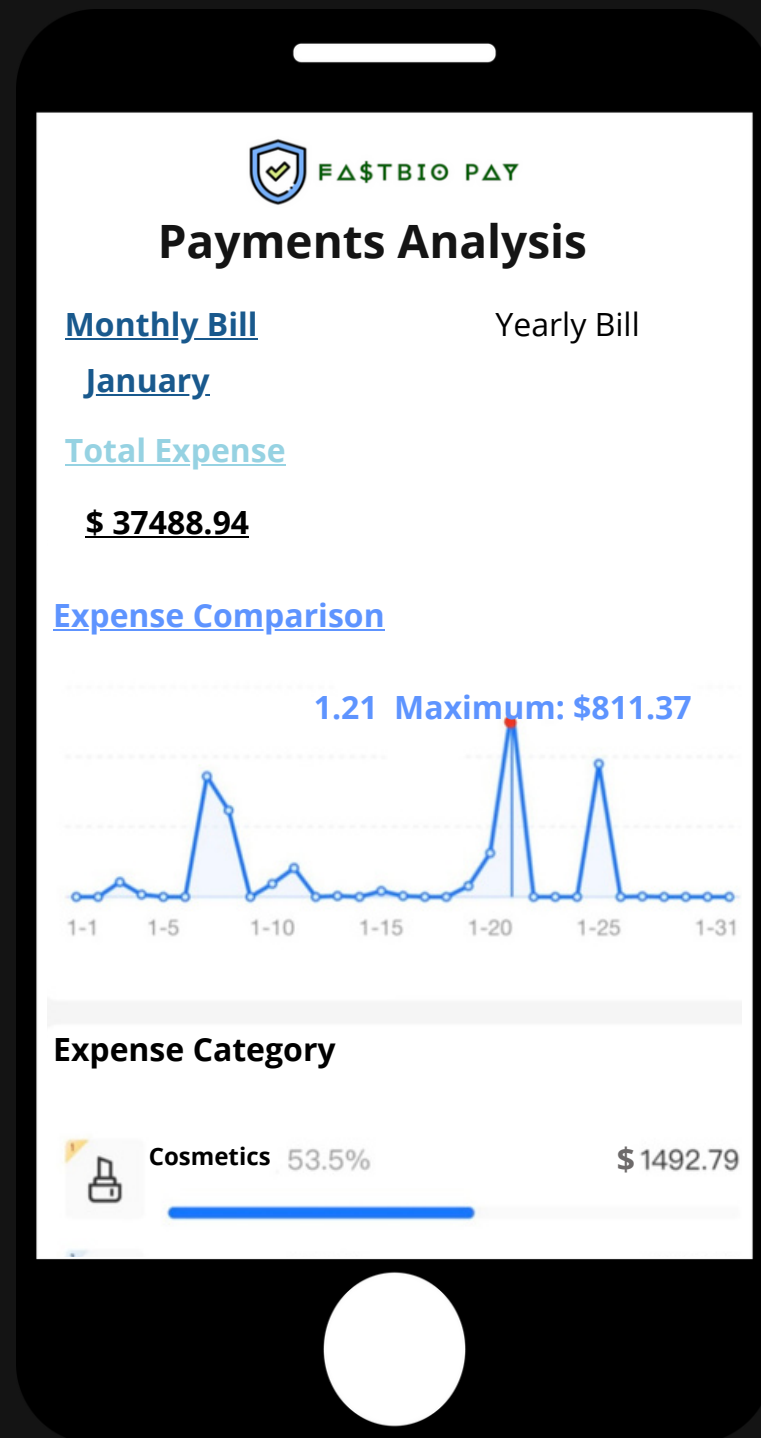


We also provide finger-vein recognition for our premium users who are highly concerned about their personal information as well as pursuing a safer biometric payment method. Finger-vein recognition includes four main steps, image capturing, pre-processing, feature extraction and matching. We provide special scanners that are supported by NIR (near infra-red) and a charge-coupled device (CCD) preprocessor camera to capture the images of the finger-vein. After image acquisition, to extract features of finger-vein, pre-processing steps which contain 3 stages (i.e., image quality assessment, ROI extraction and Normalisation and enhancement) are used to eliminate the effects of noise, shading, and low contrast on data accuracy (Shaheed et al., 2018).

The essential point of feature extraction is to identify individuals' location and orientation of minutiae points in fingerprint images. We will use the Gabor filtering technique to catch and analyse any specific frequency in fingerprint images, once features are extracted, using the classifier-based method that is supported by machine learning techniques to match the corresponding individuals' identification (Shaheed et al., 2018).

Once the customer has acquired the premium service, they can go to corresponding collaborated stores (i.e., luxury stores in city centres and supermarkets in wealthier neighbourhoods) to upload their finger-vein information. After the information is identified successfully, they can pay by scanning their finger-vein without bringing their phones!

Other Derivative Services



FastBio Pay app can further provide users a fortnightly or monthly transactions report based on their preference. While some users are highly alert and mindful of cybercrimes, they can adjust their setting on the apps for on-time warning messages whenever they purchase an item that exceeds a certain limit to ensure there are no unusual transactions.

FastBio Pay app provides wealth management services as well, users could save their money on our app to get a higher interest rate than at banks, and invest their money on financial products.



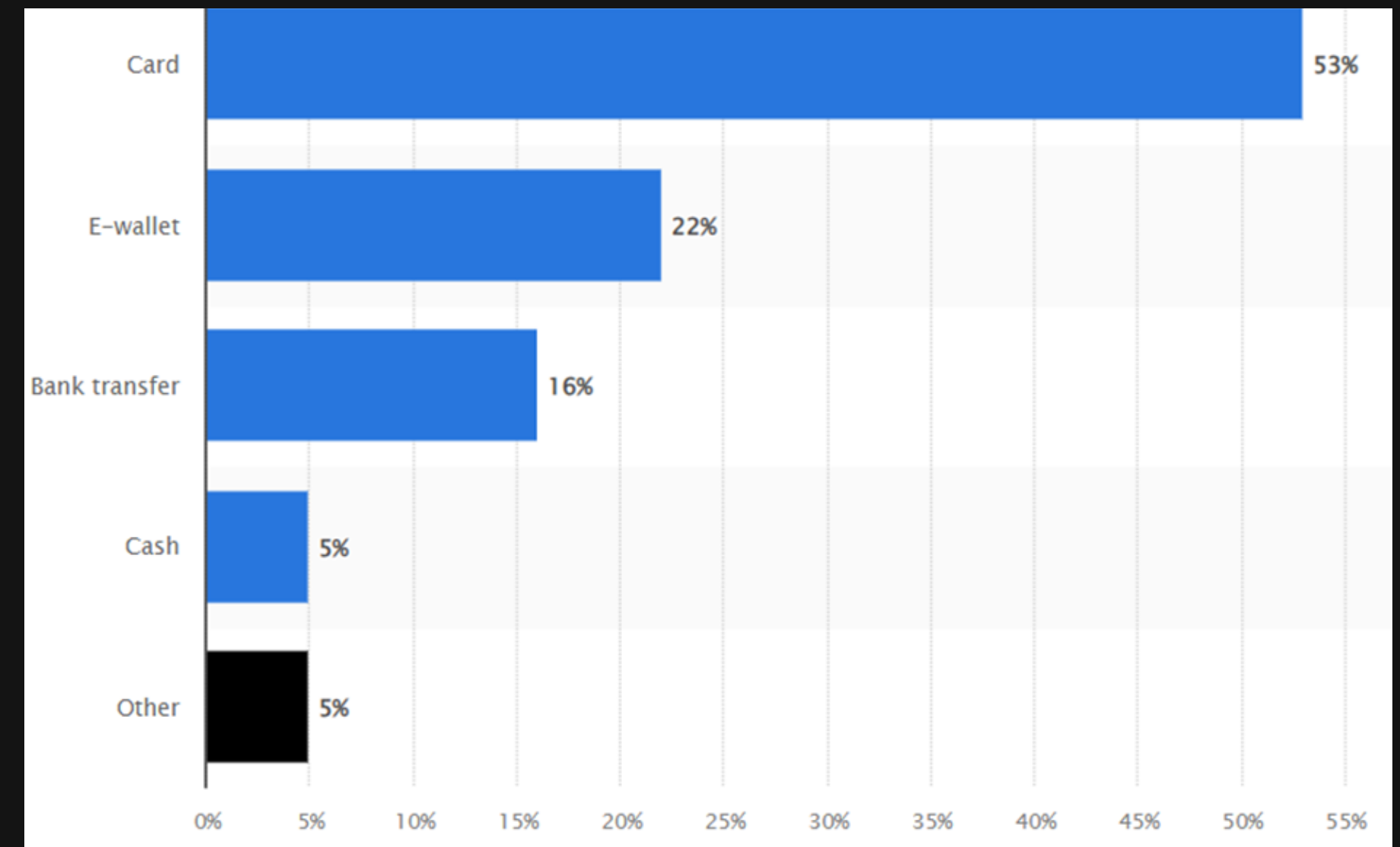
Market

THE MARKET SITUATION

According to Yuen (2022), by 2025, more than seven in ten smartphone owners will be mobile P2P payment users, opening the door to two previously unexplored markets: Gen Zers growing buying power and security-conscious customers who have eschewed digital payments due to security concerns. Furthermore, between 2021 and 2025, digital remittances are predicted to increase 45 percent to \$428 billion, according to a Juniper Research analysis. **As can be seen, e-payment is a growing trend with significant market potential, and ease and security are the primary reasons people opt for it.**

Australia is expected to be 98 percent cashless by 2024, according to financial payment giant FIS, as COVID-19 promotes the growth of payment choices. Between July 2020 and July 2021, online shopping in Australia increased by over 32%, nearly matching the previous financial year's 33.2 percent growth. According to 2018 Contevo data, Australians aged 35–44 accounted for 24% of all internet sales. Other notable age groups who purchased online were 25 to 34-year-olds and 45 to 54-year-olds, both of whom participated at a rate of over 20%. This group corresponds to those who are most likely to be victims of credit card fraud.

PPro Report 2021 also indicates that 53% of individuals prefer to pay using a card for online transactions, making it the primary mode of payment.



Market

4Ps of marketing(We have talked about production before)

PRICE AND STRATEGY

Based on our past analysis of the market's current and future state, we will release the FastBio Pay Application to address saturated mobile payment needs. The software enables users to link their credit and debit cards and maintain an interest-bearing savings account. This encourages people to deposit funds from their bank cards into this account, generating significant cash flow for our business.



To make profit, we plan that download, and use our app and the first three security measures are available for free; only the finger vein function requires payment for access. As a result, our profit model is structured in three distinct ways.

1. Invest and earn interest on money stored in the app by users as cash flow.

2. By imposing a \$99 annual VIP premium on anyone wishing to use the vein Secure Payment service.

3. When the customer base reaches a particular size, perform certain derivative services to earn some money.

According to a survey we conducted, \$99 is an acceptable fee that individuals seeking the safest payment methods may accept.

Market

PLACE

Large Supermarket

We will collaborate with Coles, Woolworths, and other large supermarkets to enable customers to pay with our FastBio Pay app in their establishments. The high volume of daily customers makes it an excellent application channel to implement in major supermarkets, which will enhance the frequency with which our application is used and the popularity with which it is known.



4Ps of marketing

Market place will be carried out in the following two ways, according to our plans for the foreseeable future.



Luxury Chain Stores

Carry out the initial deployment of venous function devices in luxury chain stores since luxury buyers tend to be quite wealthy and are more concerned with the security of their personal belongings. For example, we provide free finger-vein devices to luxury businesses such as Chanel and Hermès, as well as the creation and recording of apps from membership profiles at luxury stores like Chanel and Hermès. Because the finger vein device is so handy and quick, clients don't even need to carry a mobile phone, which can provide a more enjoyable purchasing experience for luxury buyers.

Market

4Ps of marketing

We will promote Fastbio Pay by using the following three methods

PROMOTION

One-month Free Trial

Provide a one-month free trial of the finger vein feature to new users. This enables people to become more familiar with this function and our application.

5% Discount

Consumers who use the FastBio Pay app in luxury stores and large supermarkets and retailers will receive a **5% discount on luxury and grocery goods**, respectively. We will compensate luxury retailers and supermarkets for their participation in this offer.

Advertising and Endorsing

We will invite well-known **Australian celebrities** (such as Troye Siven) to endorse FastBio Pay, and we will approach marketers about **advertising** on YouTube, Instagram, bus station billboards, and other media channels. Naturally, advertising incur some costs.

In addition, to attract a large number of users in the early stages, we must employ a variety of comprehensive promotion methods. Capable of developing a close relationship with users, the ability to successfully input user information is critical. We will provide a variety of incentives to entice consumers to enter their information, followed by a benefit if the user successfully completes their first payment transaction using our payment system.

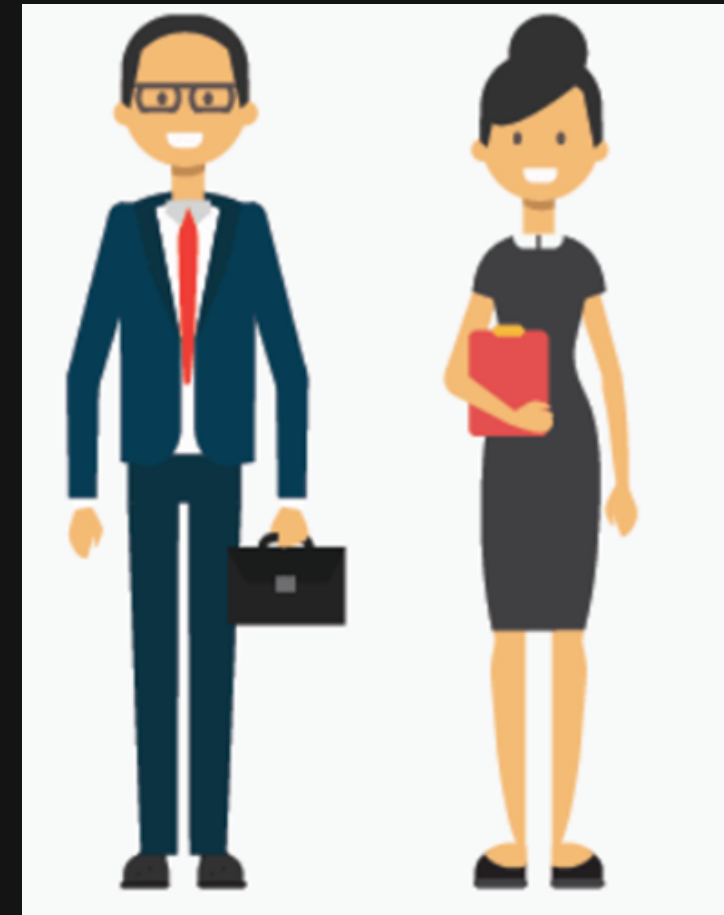
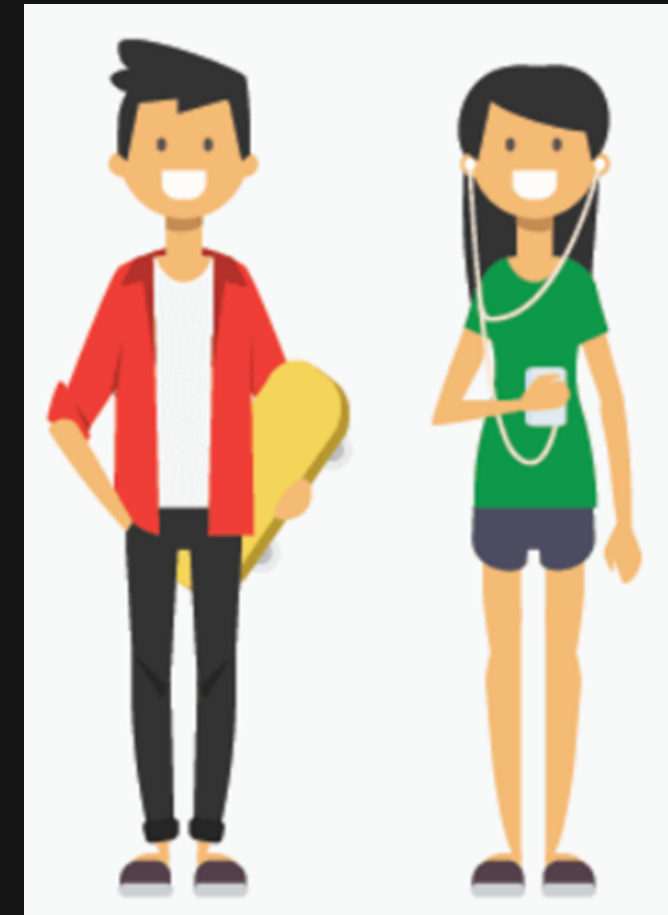


Market

TARGETED MARKET SEGMENTS

It is simple and secure to pay, particularly at businesses where you don't even need your phone to pay with our vein function, making it even more handy for older adults who are less keen to learn how to use electronics. As a result, the remaining 20% of our potential customers are spread throughout other age groups. Then, depending on Australia's total population, age distribution, and likelihood of utilizing our app, we estimate that our client base will reach around 10 million. Following further estimations, we believe that the market size will reach \$3 billion.

Our primary target clients will be persons between the ages of 34 and 54 who have substantial financial resources and are prone to payment problems, as well as young people between the ages of 20 and 35 who enjoy online shopping and are receptive to new experiences. That represents almost 80% of our overall audience.



Market

SUMMARY & PROSPECT

SHARE OF PAYMENTS MADE WITH DEBIT CARDS

44%

LEADING PAYMENT METHOD FOR ONLINE TRANSACTIONS

Card

SHARE OF MOBILE CONSUMERS WHO MAKE PAYMENTS WITH THEIR SMARTPHONE IN STORE

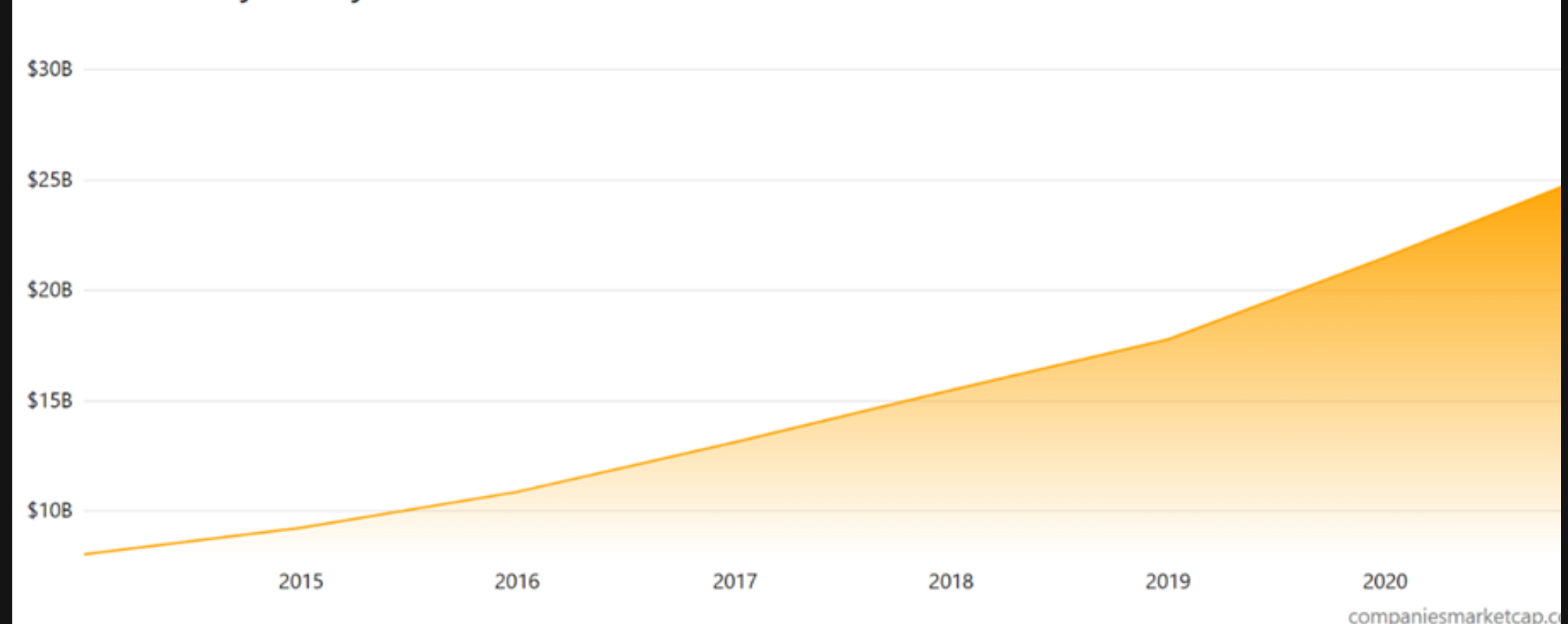
21%

According to 2019 Consumer Payments Survey, when it comes to many of their transactions, Australians are increasingly relying on electronic payment methods rather than traditional currency. Recent polls indicates that the use of debit cards is on the rise, particularly for smaller value 'tap and go' payments, which are becoming more common.

Statista Research Department reports that in Australia, the leading method of digital payments is made by debit cards, including both online and in-store transactions.

Additionally, we examined the revenue of similar mobile payment companies over the last few years, which demonstrates the industry's progressive growth and promising revenue potential. For instance, PayPal's annual income has been increasing steadily since 2015.

Revenue history for PayPal from 2014 to 2021






SWOT Analysis - Strength

FLEXIBLE CHOICES & MULTIPLE SECURITIES

Fastbio Pay retains three basic payment methods which may be seen in Australia’s current mainstream payment market, with accompany of a novel finger-vein payment method to cater to different needs of security. This technology in the safety of both at the same time, also makes payments more convenient, by eliminating the limitations imposed by credit CARDS and electronic equipment. Unlike Apple Pay with the help of Siri to complete voice recognition, Fastbio Pay only accepts the speaking command with user’s distinct voice before leaping to the actual money transferring page, which provides a double confirmation.

MULTITUDIOUS TARGET USERS

There is no denying that young generations are more aware of alternative payment methods. However, digital payment is not exclusive to young generations, more and more consumers of all ages are aware of the convenience and benefits of alternative payments. FastBio Pay with four types of biometric techniques fulfils the needs of users among all age groups and all consumption levels.

Biometric Technique			
Facial	✓	✓	✓
Voice	✓	✓	✓
Fingerprint	✓	✓	✓
Finger-vein			✓

- comparision with two major competitors in Australia

LOCALIZATION IN AUSTRALIA

Mobile payments like Apple Pay and Alipay that currently being active in Australian market are not originally launched in Australia. As payments are still limited in traditional ways like cash and credit for most of the merchants in Australia, our Fastbio Pay is one mobile payment that especially aims at Australian market to alternate current payment industry through cooperating with Australia big four banks and local supermarkets. Users live in Australia will also be fascinated by the safety and convenience from different security payments.

SWOT Analysis

OPPORTUNITIES

More consumers are opting for mobile payment

By 2024, Australia is predicted to be cashless at 98 percent.

The target consumers' enthusiasm for online shopping

An increasing number of Australians aged 35 to 54 like online shopping, which results in a growth in online payment business, which has a positive effect on the promotion of this product.

THREATS

Iteration of the original payment system's technology

When a payment system with more "security" than the original payment system enters the market, the original payment system's technology is compelled to improve, and the narrowing of the technical gap weakens the product's irreplaceability.

WEAKNESSES

Promotion is challenging in some ways

Consumers' "switching costs" make it difficult for many consumers to quickly accept a new payment system. Meanwhile, consumers incur certain learning costs as a result of the operational modes differences.

Disadvantages of late market entrant

Based on the number of users, it has no advantage over the first market entrant. Although we employ a differentiation strategy, it remains one of several payment methods in the end.

Traction

MAINTAINING CURRENT USERS

1. Incentive Mechanisms

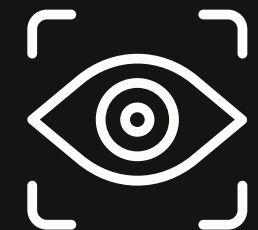
To improve user stickiness, current users can gain \$10 voucher rewards (this voucher can be used anywhere as long as paying with our app) after a new user signing up an account through their identifiable link and completing the first transaction.

3. Both Offline & Online Payments

Major mobile payment apps like Apple Pay in current Australian market largely rely on customer's mobile devices. For instance, customers are not able to complete a fingerprint recognition transaction via personal device without fingerprint sensor. Fastbio Pay implants information in both customer side and merchant side app to satisfy both online and offline payment needs as long as you are a Fastbio user, which ensure users to be free from trouble of replacing digital devices.

2. More Attractive Premium Features

Research and development costs are quite high in the start-up stage, especially for the immature finger-vein recognition technology. Introducing deep learning in processing with more data samples will improve the quality and capability to extract key images of finger-vein and efficiently decrease the following R&D expenses. Lower R&D costs allow wider application of finger-vein services offline for our premium users. Finger-vein recognition machines will not be restricted in luxury industry but can diffuse in commodities.



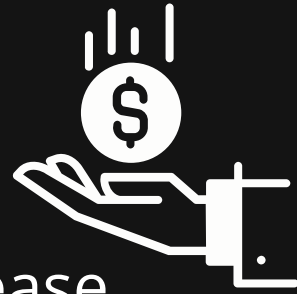
4. More Biotechnologies

Fastbio app will introduce more cutting-edge biotechnologies. Though facial mask is no longer mandatory in most settings in Australia, people are getting used to wear facial mask to protect personal safety. Facial recognition with wearing mask and iris recognition will be essential for contactless payment methods.

Risk Management

FINANCIAL

As a start-up business, we may face increase financial pressure like reduced cash flow. We will create a **monthly budget** and build enough cash reserves, meanwhile actively expand the market to generate further potential customers.



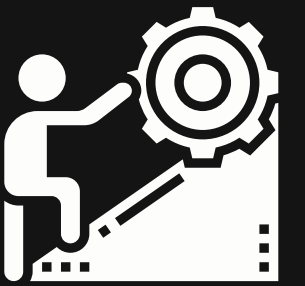
PRIVACY CONCERNS

According to 2020 Australian Community Attitudes to Privacy Survey, identifying fraud and smartphone apps are two of the top 10 biggest privacy risks identified by Australians. To cope with Australian's concerns, we provide an **unparalleled secure database** to prevent customer information leakage and forbid harmful mismanipulation of data. Unique biometric features make it safer than material cash, thereby we build the trust towards customers and lift the acceptance of new contactless payment methods.



TECHNICAL

Our business will implement **internal control and test of control in technical department**, in addition, the operation department will maintain a close contact to keep monitor daily running. We apply machine learning tools based on our users and transaction type for sharpening up our programming.

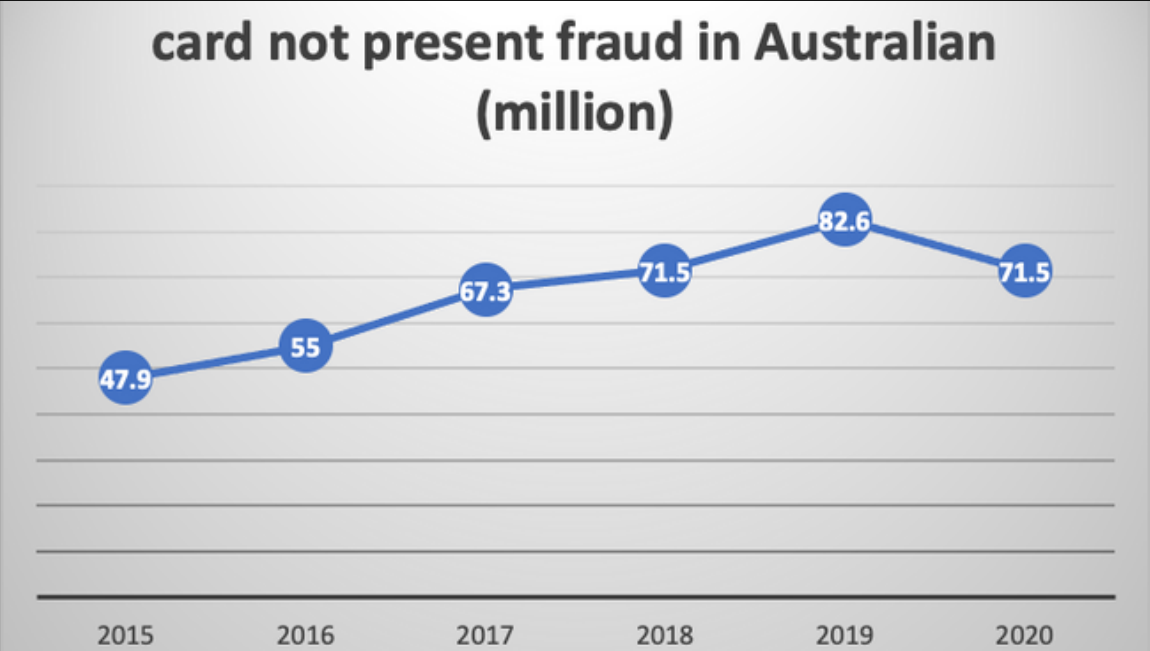


REGULATION

As our business is regulated by ASIC and ACCC, we enhance regulatory understanding through applying the regulatory framework including consumer credit licensing, registration, consumer law requirements and counter-terrorism financing requirements. There is also a **'sandbox'** option to allow testing for a broader range of financial services and credit activities for a long duration. However, there are restriction on the quantity of people and the value of financial products can be provided.



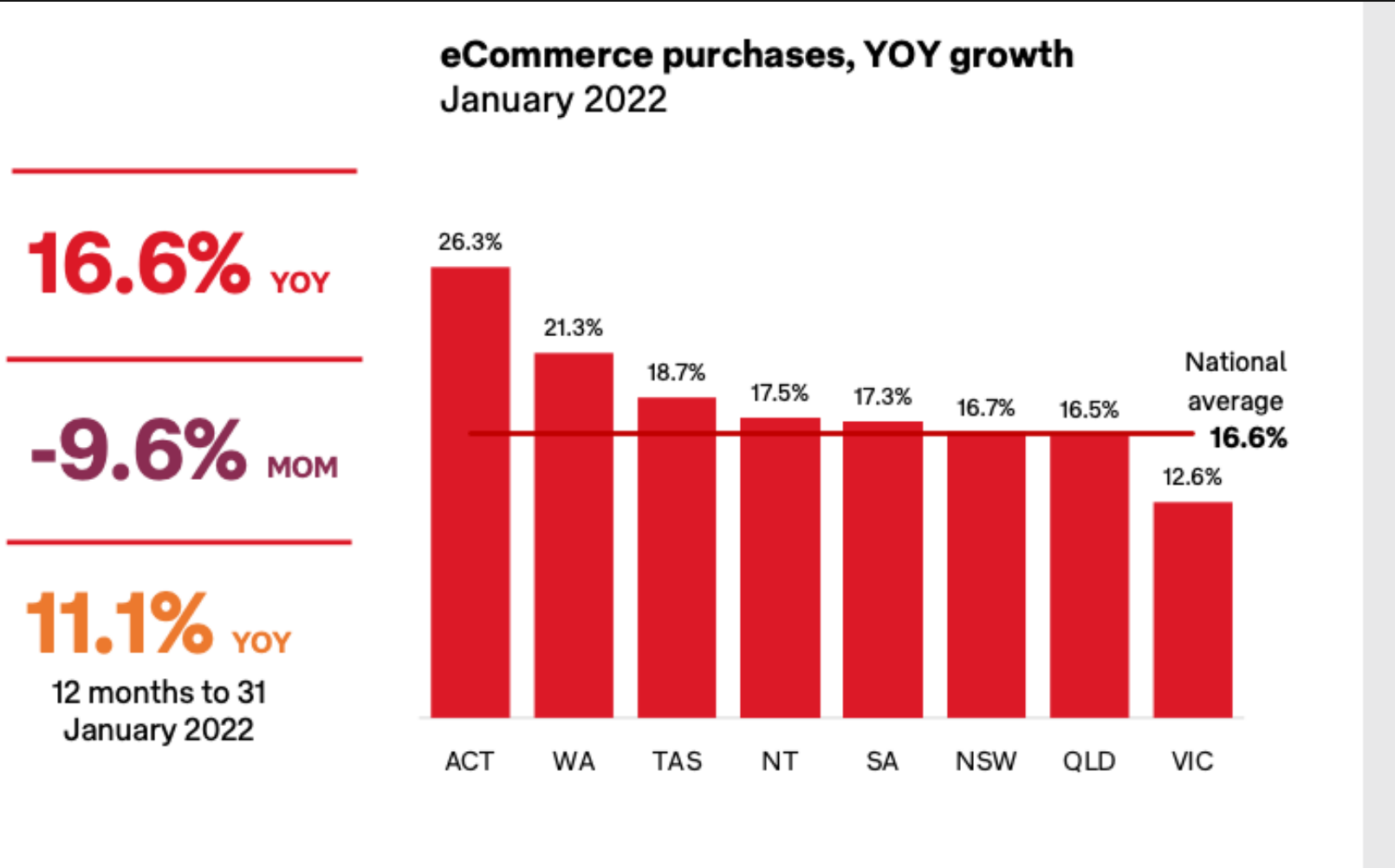
FINANCIAL : Revenue Forecast



Card not present fraud increased by 9.1% (fraud report 2021) on average from 2015 to 2020, 90% of CNP fraud in Australia came from online payment which involves digital payment and online shopping payment.

Covid-pandemic in 2020 massively changed the consumer's behaviours, shifting the physical shopping to online shopping, driving the dramatic growth of the online sales in Australia, for example, 82% of households shopping online and 52% shop more frequently online in 2020. In terms of the year on year growth recorded in the 2022 report, which is shown on the left-hand side, the national average sales growth rate is **16.6%** in Australia. The larger population of online payment generates opportunities for our company to earn profits. Thus, we expect the growth rate would be largely determined by the growth rate of online sales and digital payment, and since we take into account the digital payment in stores, we assume the growth rate is **25%**.

The company's revenue sources come from two parts, the first part is mainly from the premium and the second part is interest from exiting money base, we have 80% general customers and 20 % VIP customers, VIP customers charge 99 dollars per year, and the interest from the existing money base is 2% per year.



Inside Australian online shopping report
source: Australian post

Revenue Forecast (Assumption)

		factors that project revenue (million)			
total sales (base year 2021)	household population	growth rate	normal customers	VIP customers	interest rate
60300	10	25%	80%	20%	2%
scanner expenses(dollars)	VIP premium(dollars)	market share	share growt rate	economics of scale	40% money base (million)
45	99	99%	35%	2.00%	24120

Revenue = 20% (VIP customers)*99*household population* market share+2%*money base balance

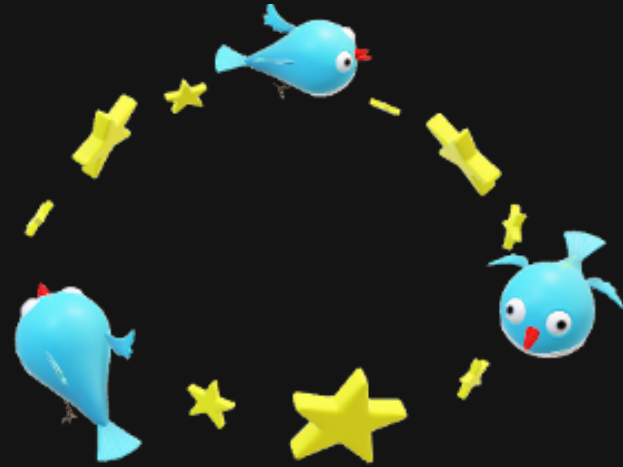
financial year	2022	2023	2024	2025	2026
market share	30.00%	40.50%	54.68%	73.81%	99.65%
revenue(million)	541.80	677.25	846.56	1058.20	1322.75

Cost (Million)	
Research and deveolpment	70
advertising	30
overhead expenses	40
scanner cost	27
server machine	90
updated cost(service cost,design cost)	50
total cost	307

cost	307.00	383.75	479.69	599.61	749.51
Gross profit	234.80	293.50	366.88	458.59	573.24
operating expenses	10.00	12.50	15.63	19.53	24.41
EBIT	224.80	281.00	351.25	439.06	548.83

- Total base revenue in 2021 is 60300 million dollars
- Our existing market share is 30% in 2022, and we expect with 35% growth rate, in this case, the market share will reach 99.65% at the end of the year 2026.
- We only charge 20% of VIP customers 99 dollars of premium and no fee for 80% of the normal customers.
- we assume the growth rate for revenue and expense is a 25% constant rate.
- Our 40% money base in our app generates a 2% of interest rate per year, money base is the money that customer leave in our app when they do online shopping, we can invest this part of money to generate profit.
- The scanner expenses are mostly provided to the rich people and the luxury shops, the original cost is 45 dollars, however, with the economics of scale , our cost for scanner expenses will decrease by 2% per year.

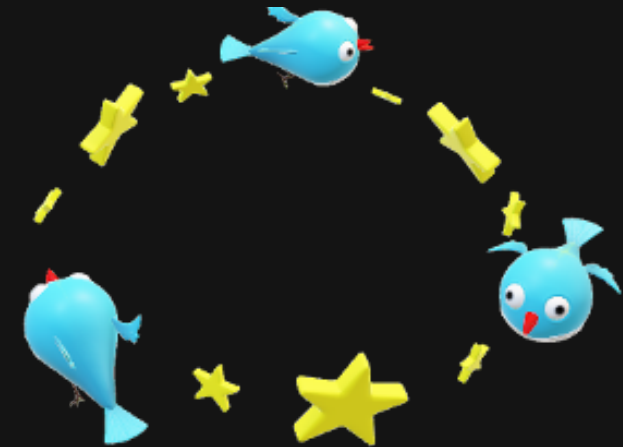
CORPORATE FINANCING



First round

Time: Start: April 2022
End : December 2023
Amount: 70-80 million

FastBio Pay requires sufficient capital to develop the product to support its future growth and expand the market share. The fundraising project involves three parts, the first part is from 2022 to 2023, and we plan to obtain 70-80 million, and the second part starts from January 2024 to March 2025, and we plan to raise 85-105 million, the final round will begin in 2025 and end in January 2027, funding around 105-185 million.



Second round

Time: Start: January 2024
End: March 2025
amount: 85-105millions

The money in the first round will be mainly used for the research and development, research and development plays an important role in incentivising a company to generate innovative products and improve the quality of service for the customers. Additionally, money can assist us to make the advertisements, allowing us to promote our products and enhance our competitive advantage in the market. Funds also reduce the pressure on the cost of the production, such as a proportion of our overhead cost, technology equipment expenses and design cost.



Third round

Time: start: April 2025
End: January 2027
amount: 150-185 millions

The second and third rounds of funds will increase due to the customer's transaction increases over the years, leading to an overall expense increase for the company. Furthermore, updating the products to improve the customer's experience such as improving the speed of the function, and ensuring the security of the payment and our first priority. In the end, we confidently believe that we will achieve a remarkable return in the sustainable future because of the advanced technology, and large potential markets in Australia.

BUSINESS VALUATION

Business valuation is the economic value of the business unit and is estimated by the share price of the company, we use FCFE Models and CAPM model to calculate the value of the company.

ASSUMPTION

- Based on the two-stage model, we assume the growth rate is constant at 25% over the next 5 years and 3% in the perpetuity.
- The earnings before tax interest rate is 30%, non-cash expenses and capital expenditure and networking capital in the balance sheet will increase at the exact same rate of 25%.
- The weighted cost of capital is 4.425% and the cost of equity is 5.3% , and we discount all the free cash flow by the cost of equity in order to obtain the present value.

Fair value (share price)

The estimated fair value of the company is 73.27 dollars, compared with a current share price of 60 dollars, representing a 22% upside of the actual price, thus we issue a buy recommendation.

	cost of equity of the fast bio pay		
risk free rate	beta (customer service)	return on market	expected cost of equity
1.87%	0.99	5.33%	5.30%

cost of equity	5.30%
tax rate	30%
cost of debt	4%
target debt to capital	35%
equity to capital	65%
WACC	4.43%

Financial year	2022	2023	2024	2025	2026
EBIT	224.8	281.0	351.3	439.1	548.8
After tax EBIT	157.36	196.70	245.88	307.34	384.18
Add:NNC	45.20	56.50	70.63	88.28	110.35
less CAPEX	66.70	83.38	104.22	130.27	162.84
Less: increase in NWC	55.80	69.75	87.19	108.98	136.23
FCFF	80.06	100.08	125.09	156.37	195.46

Terminal value	8770.70
present value	7305.40
equity value	7033.96
share outstanding	96.00
share price	73.27
current price	60.00

Team Allocation



CEO - Xin Yen Chai (z5284705)-

I am responsible of identifying the problem, stating the concerns of why this particular problem is raised, proposing solutions, presenting our proposal and supporting others' parts such as contributing ideas, formating and finalizing the presentation.

CTO - Skye Tao (z5285195)-

I'm mainly in charge of developing our app by connecting our problems with the solutions we came up with and implementing them more specifically.

CFO - Shuwen Mai (z5213023)-

I am in charge of the financial part of the company, focusing on projecting the revenue for the company in the next 5 years, raising sufficient capital from investors to fund the company activities and evaluating the fair value of the business by using FCFE models, aiming to generate an outstanding performance for the investors.

CMO - Wendy Dai (z5285204)-

I am responsible for analyzing the market situation, strategy and prospect of our product and completing the SWOT competition analysis.

COO - Kailin Wang (z5313400)-

My responsibility is to closely communicate with other departments of the company to help launch our brand, monitor daily operation, and utilise the competitive advantage of our company to attract new users while maintaing exisiting users.

References

Americanexpress.com. 2022. Advantages & Disadvantages of Contactless Payment | AMEX IN. [online] Available at: <<https://www.americanexpress.com/in/articles/life-with-amex/benefits/pros-and-cons-of-contactless-payment.html>> [Accessed 9 April 2022].

Australian Bureau of Statistics. 2022. Personal Fraud, 2020-21 financial year. [online] Available at: <<https://www.abs.gov.au/statistics/people/crime-and-justice/personal-fraud/latest-release>> [Accessed 11 April 2022].

Card fraud rises with increased online shopping, says report:[//mozo.com.au/credit-cards/articles/card-fraud-rises-with-increased-online-shopping-says-report](https://mozo.com.au/credit-cards/articles/card-fraud-rises-with-increased-online-shopping-says-report) [Access on 6 April 2022]

Credit card fraud in Australia explained – and 6 tips to avoid it | Finder. [online] Available at: <<https://www.finder.com.au/credit-card-fraud-traps-and-scams-guide>> [Accessed 11 April 2022].

Companiesmarketcap.2022.Revenue history for PayPal from 2014 to 2021. [Online] Available at: <<https://companiesmarketcap.com/paypal/revenue/>> Accessed on 9 April 2022> [Accessed on 9 April 2022]

Free cash flow to equity <https://corporatefinanceinstitute.com/resources/knowledge/valuation/free-cash-flow-to-equity-fcfe/> [assessed on 11 April 2022]

Xi, X, Yang, L & Yin, Y 2017, 'Learning discriminative binary codes for finger vein recognition', Pattern recognition, vol. 66, pp. 26–33.

James, Caddy. 2021. Australia forecast to be effectively cashless by 2024.[Online] Available at:<<https://www.9news.com.au/national/australia-cashless-society-by-2024-forecast-to-crack-down-on-black-economy/31126606-4231-4992-84d2-9293c4adb278>> [assessed on 8 April 2022]

Latest eCommerce trends:<https://auspost.com.au/business/marketing-and-communications/access-data-and-insights/ecommerce-trends> [Access on 6 April 2022]

March, Stuart. 2021. Consumer Payment Behaviour in Australia: Evidence from the 2019 Consumer Payments Survey. [Online] Available at: Consumer Payment Behaviour in Australia: Evidence from the 2019 Consumer Payments Survey. [Online] Available at: <<https://www.rba.gov.au/publications/rdp/2020/2020-06/full.html>> [Accessed on 9 April 2022]

Market Risk Premia 2021, Implied Market-risk-premia (IMRP): Australia, 2021, Market Risk Premia, Australia:[//www.market-risk-premia.com/au.html](https://www.market-risk-premia.com/au.html) [assessed on 8 April 2022]

References

New York University 2021, Total Betas by Sector (for computing private company costs of equity) US://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/totalbeta.html [accessed on 7 April 2022]

News. 2022. Trait that's costing millennials. [online] Available at: <<https://www.news.com.au/finance/business/retail/millennials-could-be-losing-out-on-thousands-of-dollars-in-discounts-because-they-shop-online/news-story/8742db52e406c363b6f9a9a156d0d3e8>> [Accessed 11 April 2022].

OAIC. 2020. Australian Community Attitudes to Privacy Survey. [online] Available at: <<https://www.oaic.gov.au/engage-with-us/research/australian-community-attitudes-to-privacy-survey-2020-landing-page/2020-australian-community-attitudes-to-privacy-survey>> [Accessed 5 April 2022].

Payment processing fee <https://corporatefinanceinstitute.com/resources/knowledge/finance/payment-processing-fees/> [assessed on 5 April 2022]

PPRO Australia Report 2022 [Online] Available at: <<https://www.ppro.com/countries/australia/>> [Accessed 8 April 2022].

Shaheed, K, Liu, H, Yang, G, Qureshi, I, Gou, J & Yin, Y 2018, 'A systematic review of finger vein recognition techniques', Information (Basel), vol. 9, no. 9, p. 213.

Fraud Statistics Jul 20 - Jun 21 | Australian Payments Network. [online] Available at: <<https://www.auspaynet.com.au/resources/fraud-statistics/july-2020-june-2021>> [Accessed 11 April 2022].

Statista. 2022. Australia: consumer online commerce behavior changes during COVID-19 2020 | Statista. [online] Available at: <<https://www.statista.com/statistics/1228942/australia-consumer-online-commerce-behavior-changes-during-covid/#:~:text=The%20pandemic%20also%20witnessed%20a,first%20time%20during%20the%20pandemic.>> [Accessed 11 April 2022].

Statista.2022.Payment methods for e-commerce transactions in Australia 2020, by type. [Online] Available at: <<https://www.statista.com/statistics/1178143/australia-payment-methods-online-transactions/>> [Accessed 8 April 2022]

Statista.2022. Payment method usage Australia 2021.[Online] Available at: <<https://www.statista.com/statistics/1261115/australia-payment-methods-used-2021/>>[Accessed 9 April 2022]