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Growth opportunities for App-based banking in Singapore



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Analyst recommendations



02

Twimbit App CX framework



05

Best practices from peer regions



03

Twimbit Digital App Experience Score (TDEX) of Singapore's top 4 banks







Growth opportunities for App-based banking in Singapore



Average time spent on internet – **6 Hrs. 59 Mns** (Jan, 2023)

Total internet users – **5.81 Mn** (Jan, 2023)

Number of cellular mobile connections – **9.22 Mn** (Jan, 2023)

UPI transactions - About **74 Bn** transactions amounting to approximately **2 Tn** Singapore dollar (FY 2022)

Source: Meltwater, datareportal, twimbit analysis

of neobanks – **5 neobanks** in year 2023

Number of e-wallet users - Almost **4 Mn i.e. 70%** adoption rate of e-wallet users

Internet penetration - **96.9%** in FY 2022

Online banking penetration - **73.91%** in FY 2022

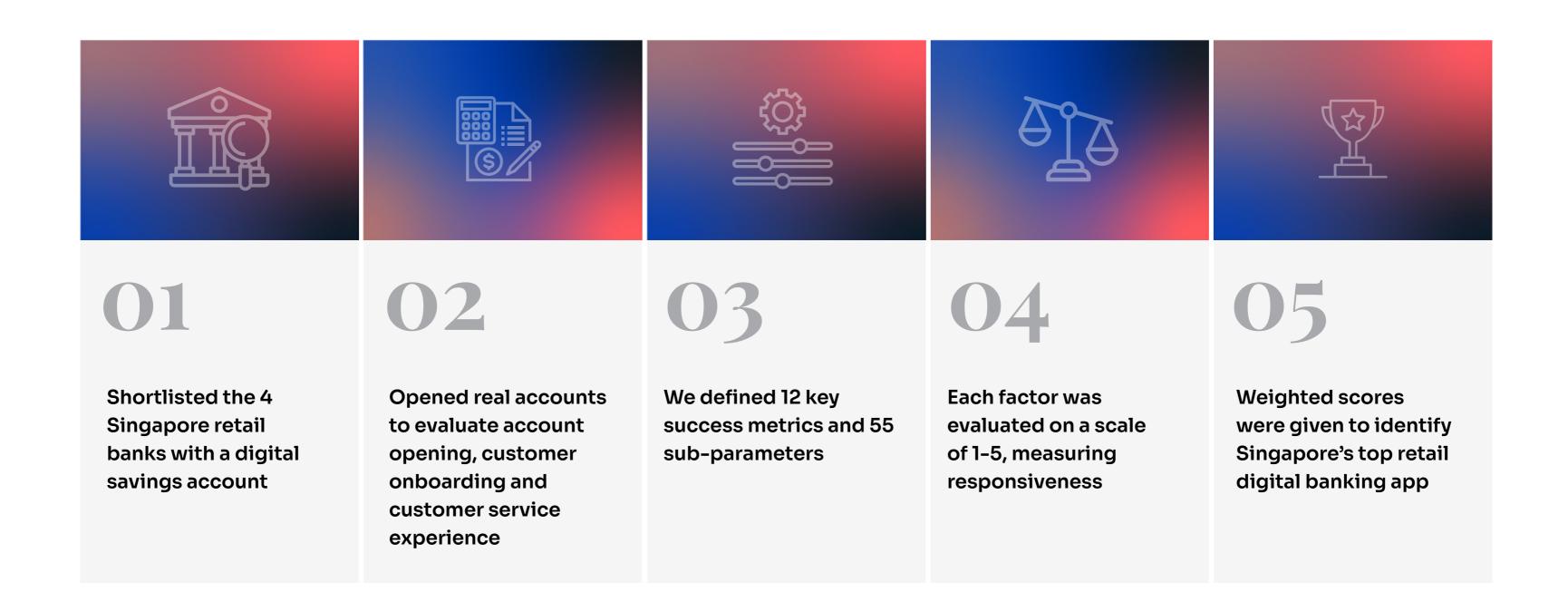




Twimbit App CX framework

Twimbit CX research methodology

07



Twimbit 3Es framework assesses the performance of a digital business by evaluating its efficiency, engagement, and ecosystem.

What is the outcome? How is the performance?

Twimbit 3Es score

Twimbit 3Es score

Measured on the process to regiester, purchase or get help

Banking

- Mobile appexperience
- Customer onboarding
- Customer service

Engagement

Measured as monthly transaction users (depending on industry) over total users

Digital

Total online transaction/active users

Total registered / potential users

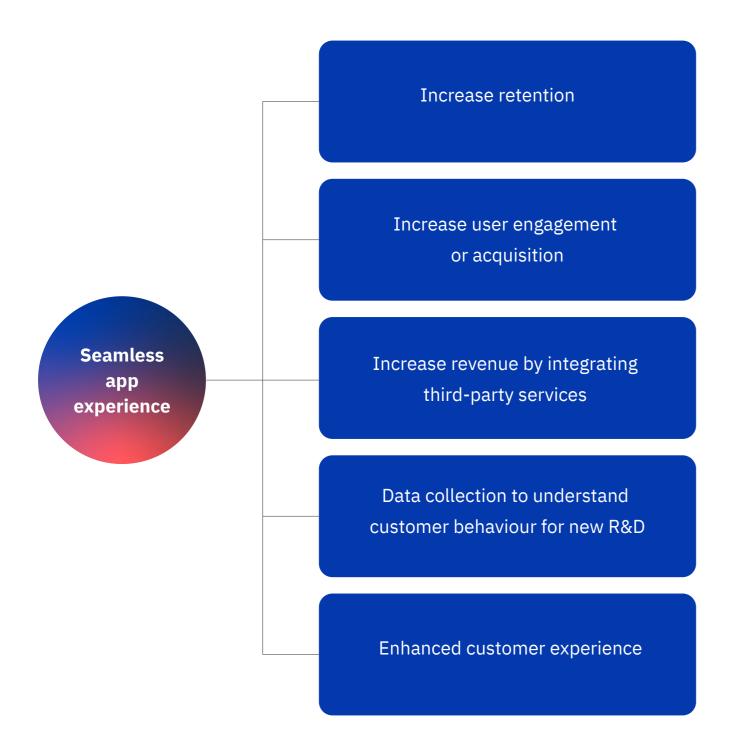
Ecosystem

Measured on non-core business revenue against total revenue

Non-core business revenue

Total revenue





App orchestrates embedded experiences

Continuously optimizing the app experience can enhance user engagement, strengthen customer relationships, and ultimately boost revenue

Digital Efficiency Value

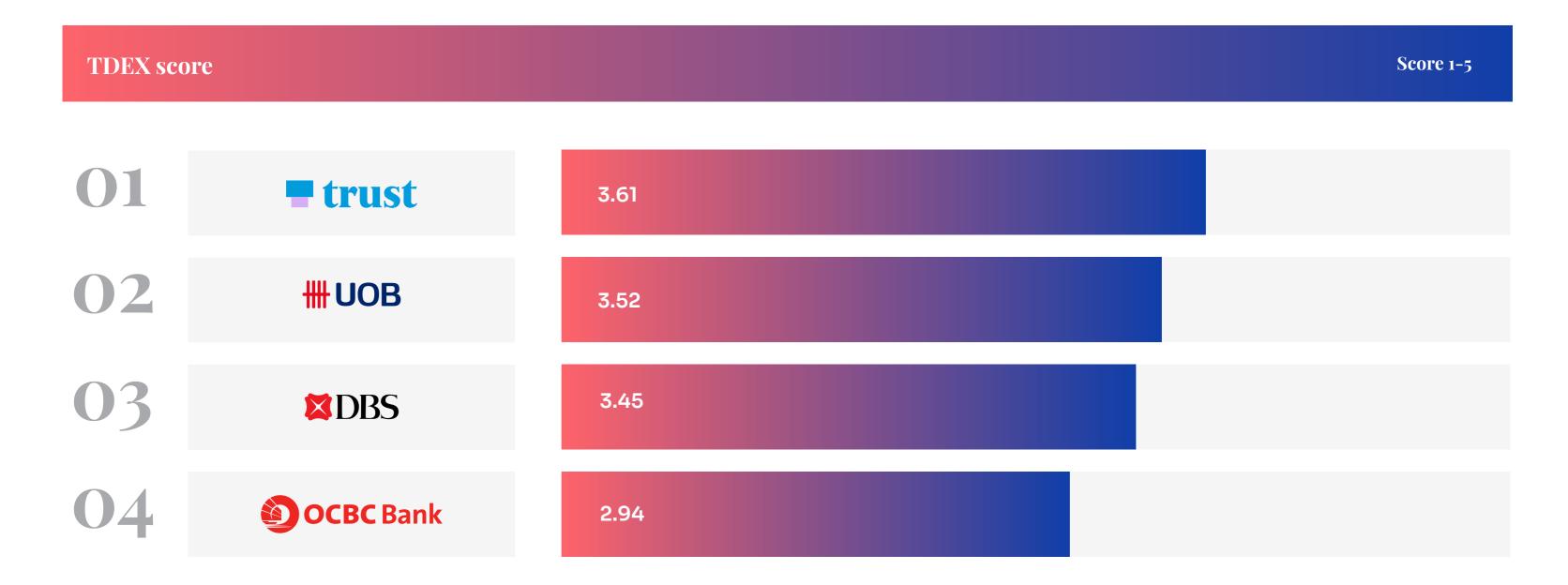
Measure the success of efforts to boost efficiencies in account opening, purchasing products via digital channels, performing transactions, interacting with the bank digitally, and closing the account.





TDEX score of Singapore's top 4 banks

Top 4 banks to ace digital app experience in Singapore



Twimbit TDEX score

A diagnostic framework to evaluate the digital experience of a company

Mobile app experience

- Mobile application availability and capabilities
- App activation convenience
- App security and privacy

Customer onboarding experience

- Discovery journey
- Clarity of products or services
- Ease of account opening
- Activation convenience
- Debit card application

Customer service experience

- Customer support channels
- Time taken to response to query
- Self-service potential: FAQs
- Self-service potential: IVR



How digital banking apps are performing?

Mobile app experience	DBS	OCBC	Trust	UOB
Mobile application availability and capabilities	5.00	3.67	5.00	4.33
App activation convenience	3.67	4.33	4.67	4.33
App security and privacy	4.17	2.92	4.17	4.17
Customer onboarding experience	DBS	OCBC	Trust	UOB
Discovery journey	4.06	3.13	3.75	4.38
Clarity of products or services	3.66	2.58	3.98	4.07
Ease of account opening	3.81	3.46	3.50	3.35
Activation convenience	4.00	2.00	3.50	1.50
Debit card application	2.17	2.17	5.00	2.17
Customer service experience	DBS	ОСВС	Trust	UOB
Customer support channels	3.50	3.50	3.00	4.50
Time taken to response to query	1.85	2.25	2.85	2.05
Self-service potential: FAQs	3.33	2.91	2.29	4.16
Self-service potential: IVR	1.40	1.40	1.00	2.00



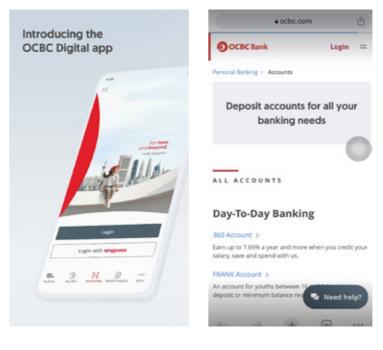
Mobile app experience

Mobile application availability and capabilities

Mobile app experience	DBS	OCBC	Trust	UOB
Mobile application availability and capabilities	5.00	3.67	5.00	4.33

Area of improvement

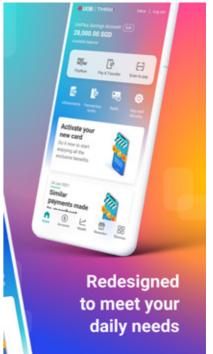
Evaluating criteria	DBS	OCBC	Trust	UOB	
Availability of App	\	✓	✓	✓	
Ease of locating app on Play store/App store	\	Slow	✓	Moderate	
App loading time		App redirects to browser		Web app	



OCBC banking app redirects to browser





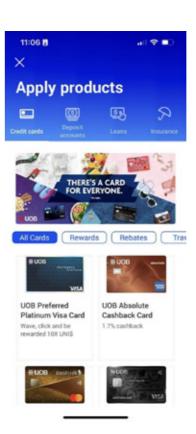


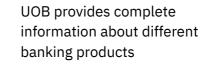


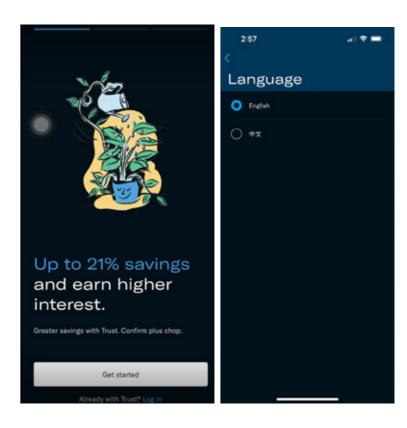
App activation convenience

Mobile app experience	DBS	OCBC	Trust	UOB
App activation convenience	3.67	4.33	4.67	4.33

Evaluating criteria	DBS	OCBC	Trust	UOB
Efficiency of banking app activation (first screen CTA menu)	No clear utility before a/c sign-up, no option for language selection, unable to apply for other banking products apart from a/c	No option to apply for other banking products apart from a/c	✓	Does not allow language selection
Numbers of steps taken to register/sign up on App	✓	✓	✓	✓
Time taken to register/ sign up on App	✓	✓	✓	✓







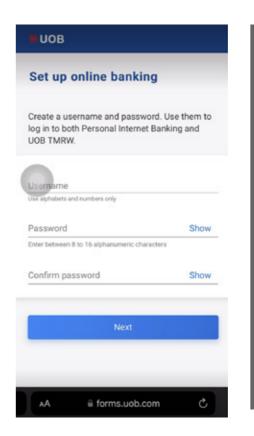
Trust bank differentiates b/w sign up & sign in and provide option for language selection

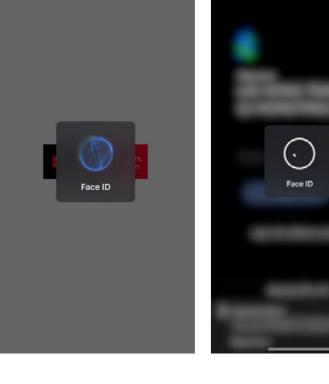


App security and Privacy

App security and Privacy 4.17 2.92 4.17 4.17	Mobile app experience	DBS	OCBC	Trust	UOB
	App security and Privacy	4.17	2.92	4.17	4.17

Evaluating criteria	DBS	OCBC	Trust	UOB
Type of authentication asked during the journey	✓	✓	✓	✓
Ease of authentication	✓	After the a/c opening process	✓	✓





Setting username and password for accessing UOB TMRW during the a/c opening process

DBS and Trust bank biometrics setup after the a/c opening process



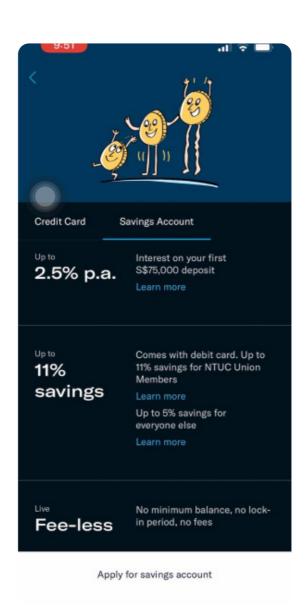
Bank to ace "Mobile app experience" - Trust Bank



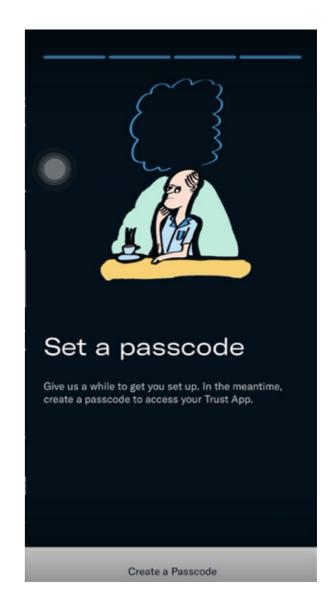
Ease of using app in different languages



Clear CTA differentiating new user to 'Get started' and already user with 'Log in'

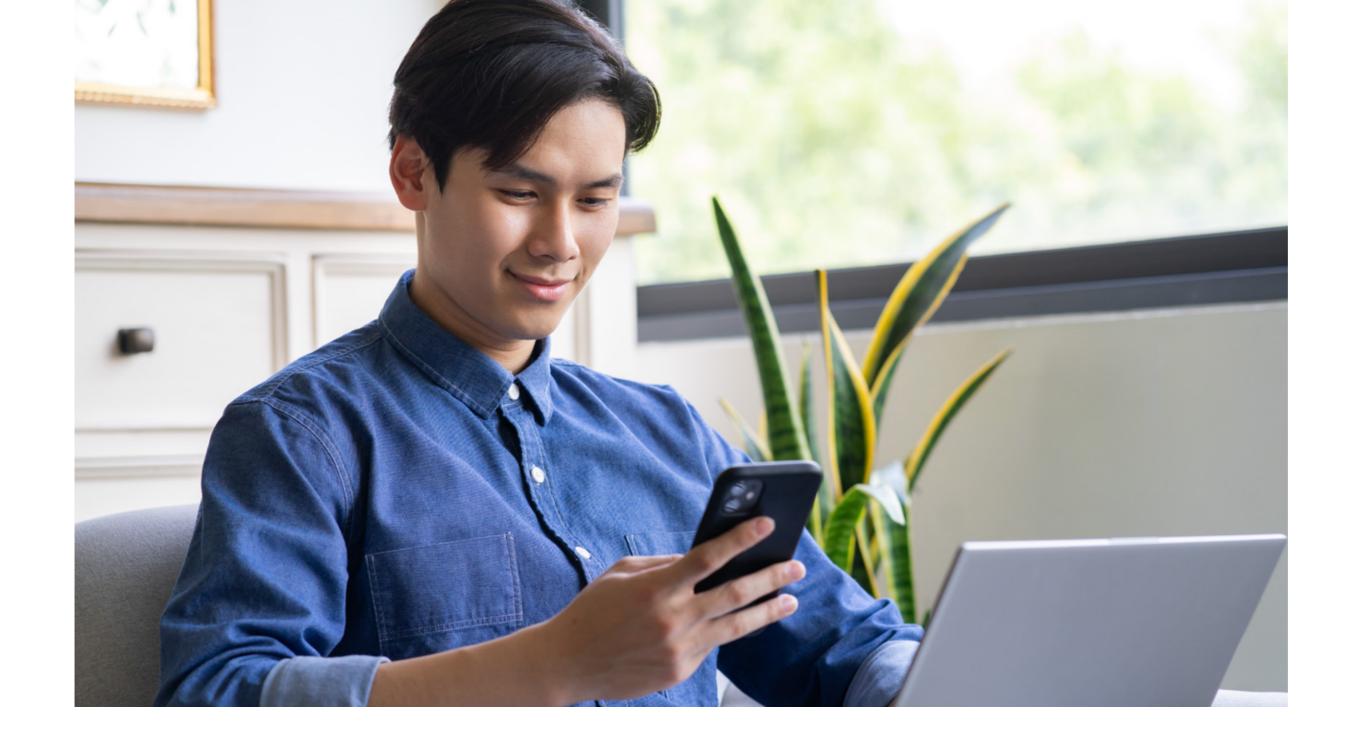


Clear CTA to apply for credit card or savings a/c with important information and option to know more



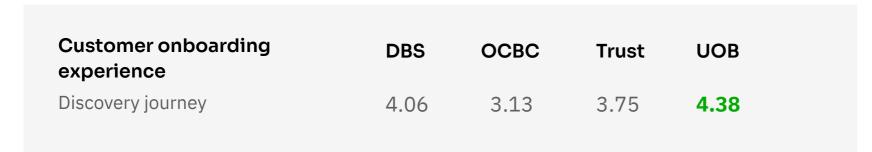
Creating a passcode to access
Trust app during the a/c opening
process

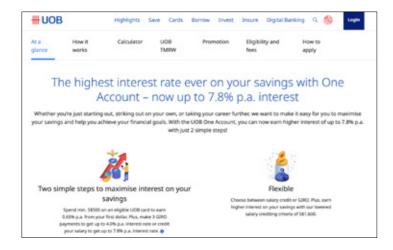




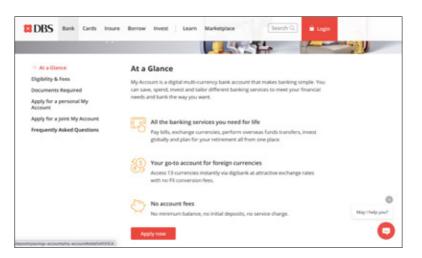
Customer onboarding experience

Discovery journey





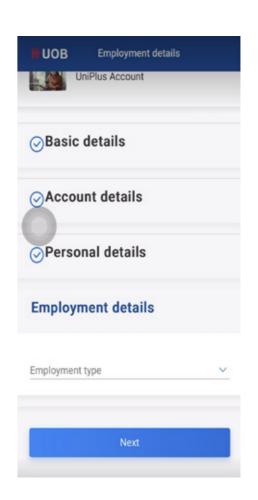
Minimal or no visual cues or images or just wording



DBS website layout with navigation option on left

Evaluating criteria	DBS	OCBC	Trust	UOB	
Ease of browsing information (Web)	✓	Clean but oversize whitespace, minimal visual cues, No clear navigation guide	No clear navigation guide	✓	
Ease of browsing information (mobile app)	Clarity of a/c sign-up not equip with navigation guide	Clarity of a/c sign-up not equip with navigation guide	✓	✓	





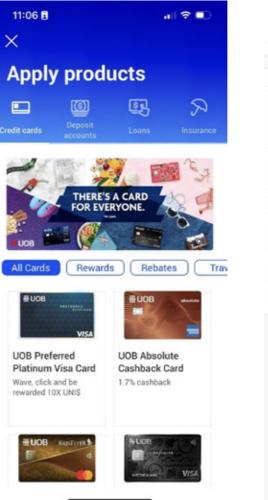
Clarity of a/c opening with defined next steps by Trust bank and UOB

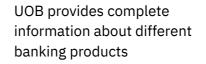


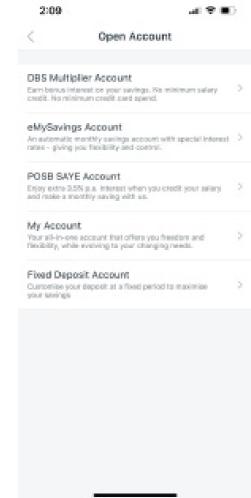
Clarity of products or services

Customer onboarding experience	DBS	OCBC	Trust	UOB
Clarity of products or services	3.66	2.58	3.98	4.07

Evaluating criteria	DBS	OCBC	Trust	UOB
Information about saving account (steps, document requirement, min. balance, discount and offer, fees and charges)	No information about a/c opening steps, fees and charges	No information about a/c opening steps, cross-product benefits	No information about fees and charges, cross-product benefits	No information about a/c opening steps, cross-product benefits
Information about other banking products (description, CTA to apply)	✓	N/A as app redirects to browser	✓	✓
Product comparison and clarity (website)	Only highlight key features	Only highlight key features	✓	✓
Time spent on understanding the products	✓	✓	✓	✓







DBS product comparisons

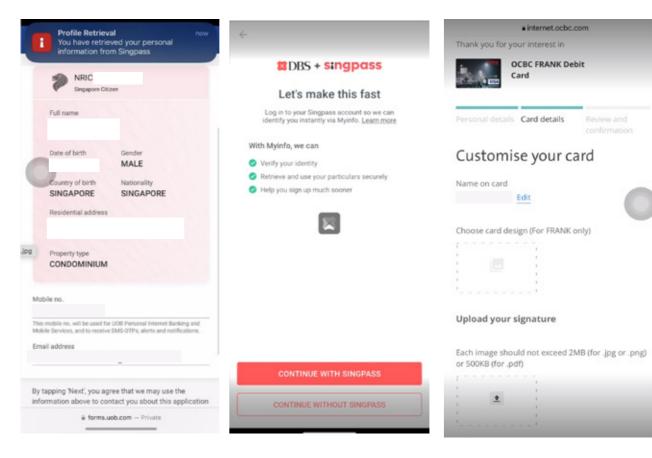


Ease of account opening

Customer onboarding experience	DBS	ОСВС	Trust	UOB
Ease of account opening	3.81	3.46	3.50	3.35

Area of improvement

Evaluating criteria	DBS	OCBC	Trust	UOB
Document requirement	\checkmark	Signature + Singpass	✓	✓
In-depth information of document verification	\	✓	< 7 clicks	< 7 clicks
Auto-fill	✓	✓	✓	✓
Ease of doing KYC	✓	✓	✓	✓
No. of steps involved in verification process (KYC + document verification)	<u> </u>	✓	✓	6-7 clicks



UOB auto-fetch information from Singpass

DBS offer option to continue with or without Singpass

OCBC require customer signature with Singpass

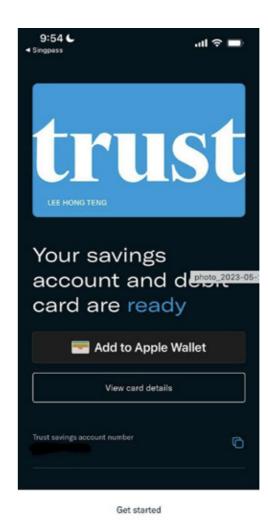


Activation convenience

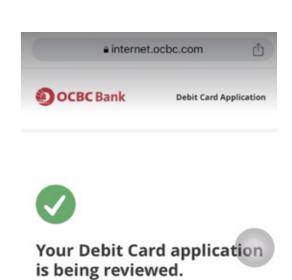
Customer onboarding experience	DBS	ОСВС	Trust	UOB
Activation convenience	4.00	2.00	3.50	1.50

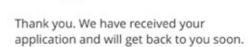
Area of improvement

Evaluating criteria	DBS	OCBC	Trust	UOB
Number of steps taken to activate bank a/c (total steps)	✓	✓	8-10 steps	8-10 steps
Speed of account approval/ Time taken to activate bank account i.e. accepting/making payments, bank transfers etc.	✓	More than a day	✓	More than a day



Instantly activated bank a/c by Trust bank







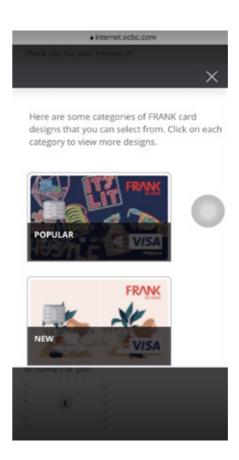
No defined wait time for OCBC a/c activation



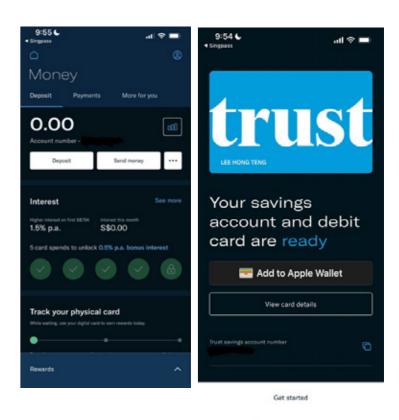
Debit card application

Customer onboarding experience	DBS	ОСВС	Trust	UOB
Clarity of product or services	2.17	2.17	5.00	2.17

Evaluating criteria	DBS	OCBC	Trust	UOB
Debit card option	Only physical card	Only physical card	✓	Only physical card
Ease of applying for debit card	No virtual card but clear CTA for physical card application during account opening	No virtual card but clear CTA for physical card application during account opening	✓	No virtual card but clear CTA for physical card application during account opening
Time taken to activate virtual card	N/A	N/A	✓	N/A



OCBC offering range of designs to customise physical debit card

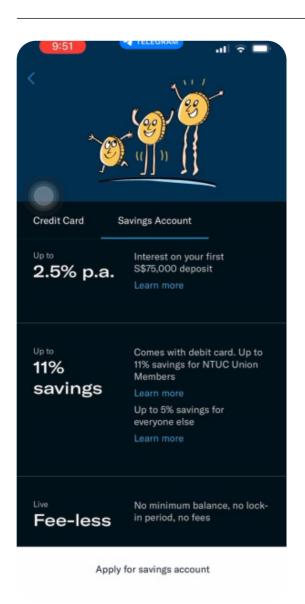


Trust bank offering virtual debit card with instant activation and feature to track your delivery card



Bank to ace "Customer onboarding experience"- Trust Bank

#1 Open savings account



O1Clarity of other banking

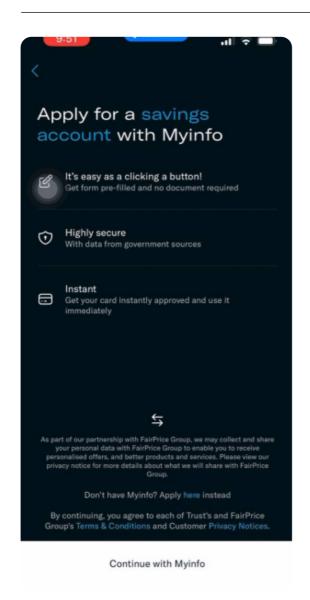
02

products

This page shows comprehensive information about the savings account

O3Clear CTA to apply for an account

#2 KYC with Singpass



Option to apply for Myinfo

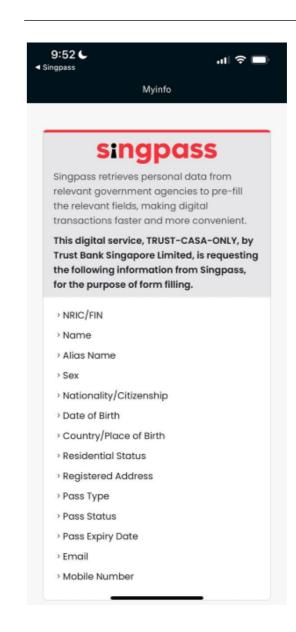
01

Information about document requirement and debit card

02

Using Singpass to retrieve personal information

#3 Singpass information

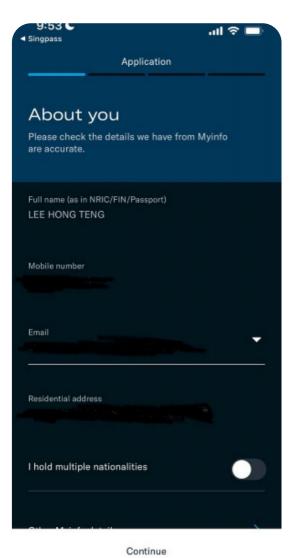


O1Information auto-fetched



Bank to ace "Customer onboarding experience" - Trust Bank

#4 Steps to start account

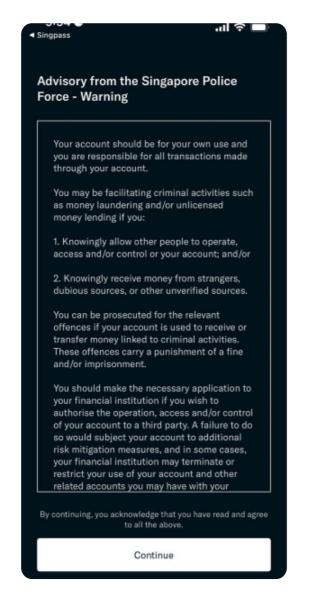


O1Number of steps to sign up

O2Personal information auto filled

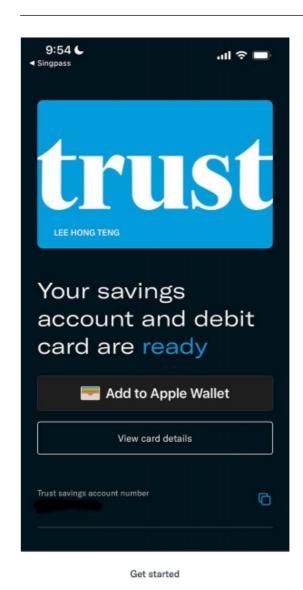
O3Clear CTA to apply for an account

#5 Advisory



O1
CTA to continue

#6 Virtual card

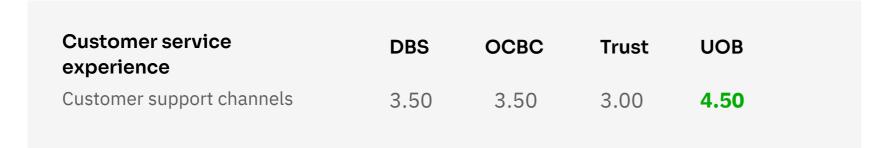


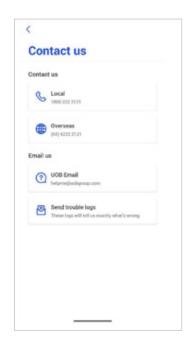
O1
Instantly activated
a/c with ready to use
virtual card



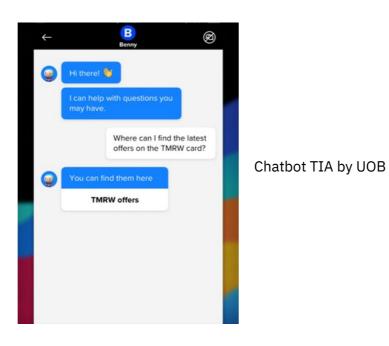
Customer service experience

Customer support channels





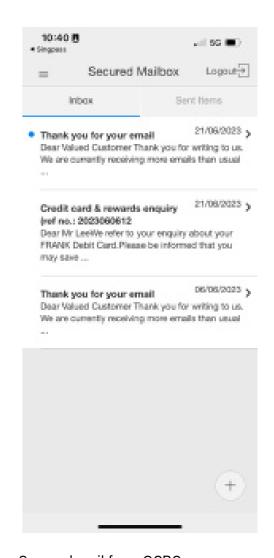
Customer support options on UOB app



Evaluating criteria	DBS	OCBC	Trust	UOB
Email, Hotline, Live-chat on app or website (real human interaction), Social media platform, Conversational AI	No live-chat on app	No live-chat on app	No email, no chatbot	✓







Secured mail from OCBC

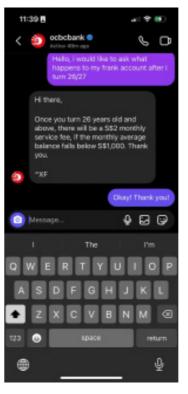


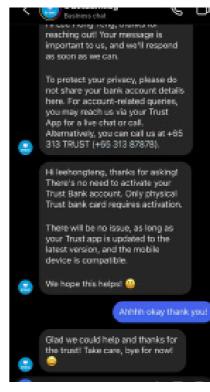
Time taken to respond to query

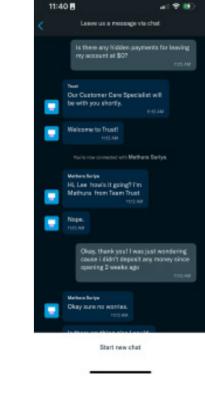
Customer service experience	DBS	OCBC	Trust	UOB
Time taken to response to query	1.85	2.25	2.85	2.05

Area of improvement

Evaluating criteria	DBS	OCBC	Trust	UOB
Email	More than 36 hours	More than 36 hours	No email	More than 36 hours
Hotline	✓	✓	✓	✓
Live-chat response	N/A	N/A	✓	More than 5 minutes
Social media platform (exclude auto-reply)	More than 15 minutes	✓	More than 15 minutes	More than 30 minutes
Conversational AI	Chatbot not able to refer connect to live agent	Chatbot not able to refer connect to live agent	N/A	✓







Social media customer support reply by OCBC and Trust bank

Trust bank live chat with agent

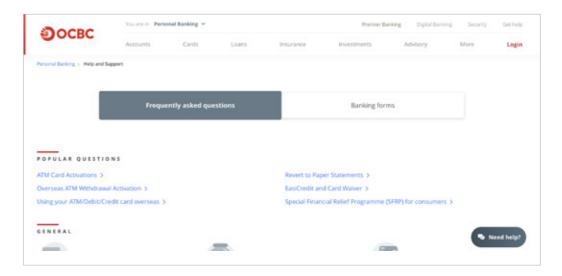


Self-service potential: FAQs

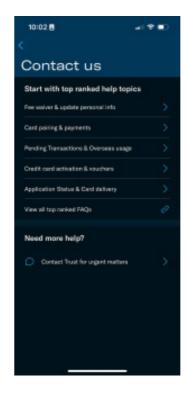
Customer service experience	DBS	OCBC	Trust	UOB
Self-service potential: FAQs	3.33	2.91	2.29	4.16

Area of improvement

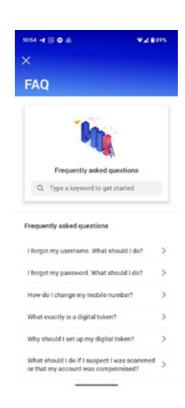
Evaluating criteria	DBS	OCBC	Trust	UOB
Clarity of FAQs	✓	✓	✓	✓
Visual cues	✓	✓	No visual cues only words	✓
Answer clarity	Limited number of answers contain visual aid	No visual aid only wordings	No visual aid only wordings	No visual aid only wordings
Customer support call to action available on FAQs site	No CTA for call/chat	No CTA for call/chat	No CTA for call/chat	✓



OCBC FAQ website



Trust bank FAQ section



UOB FAQ section



Self-service potential: IVR

Customer service experience	DBS	OCBC	Trust	UOB
Self-service potential: IVR	1.40	1.40	1.00	2.00

Area of improvement

Evaluating criteria	DBS	OCBC	Trust	UOB
Basic functions available such as balance check, account information	✓	✓	Not available	✓
Can purchase add-on value added services	Not available	Not available	Not available	Not available
Speech recognition and AI-enabled	Limited advertisements and public announcement	Limited advertisements and public announcement	✓	✓
Personalized IVR functions based on customer phone number and past IVR, Speech recognition and AI-enabled	Not available	Not available	Not available	Not available

Features



Account Information

- Enquire on balance of current and/or savings account as well as credit cards
- Enquire on recent transactions
- Enquire on cheque status
- Request for new cheque book or stop cheque payment
 UNI\$ Rewards Redemption
- Change Telephone PIN (TPIN)





SMS One Time Password

Access your account information via Phone Banking by entering your NRIC or card number together with a onetime password sent via SMS to your registered mobile number.



Telephone Pin (TPIN)

You can also access your account information using access code and Telephone PIN.



Other Services

- Activate new card
 Enable/disable overseas
- magnetic stripe
 Request for Fee waiver
- Report loss of cards

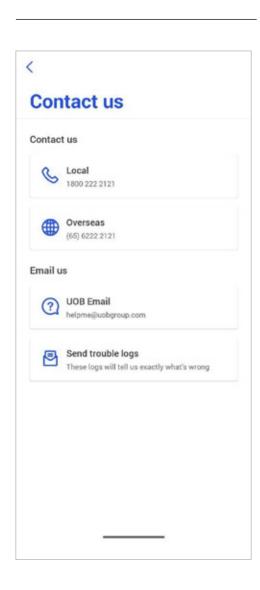
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UOB phone banking features



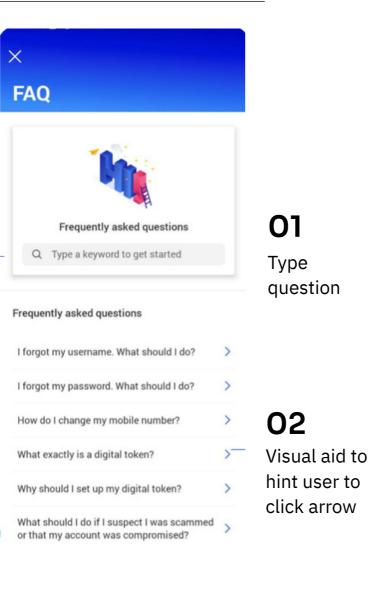
Bank to ace "Customer service experience" - UOB

Customer support

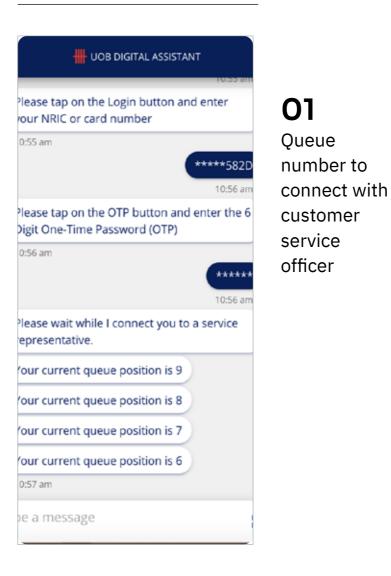


Various modes of customer support under one section

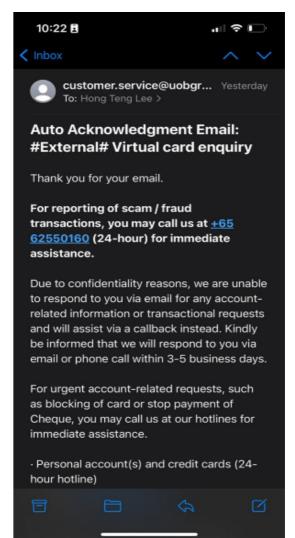
FAQ



Live chat



Email



01

Auto acknowledge email



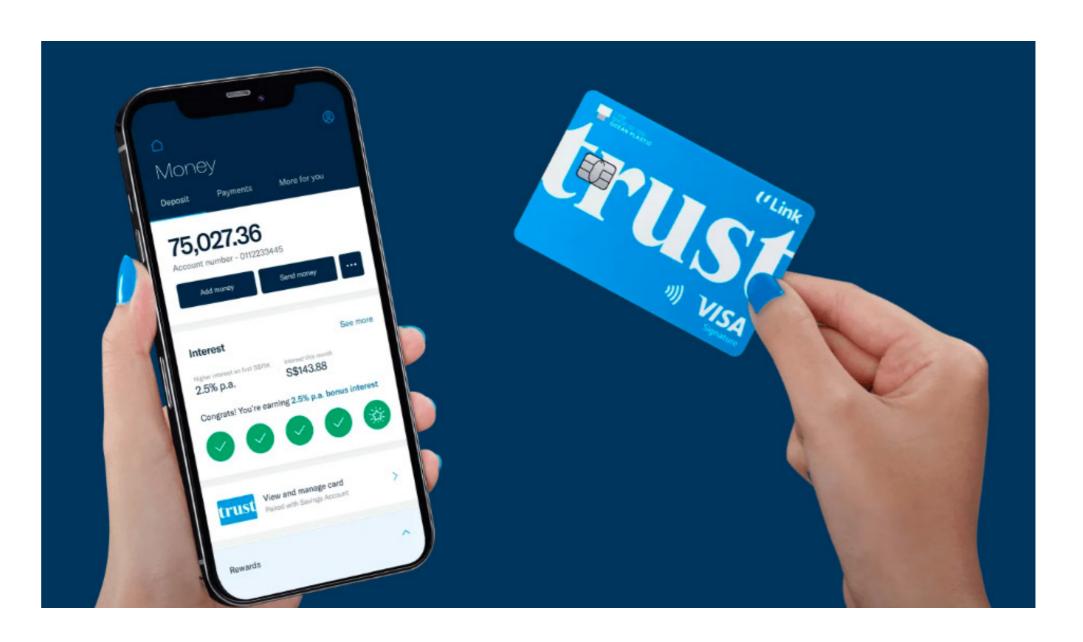


Analyst recommendations

Deep dive into TDEX score for Trust Bank

trust

TDEX score	3.61
Mobile app	4.61
Customer onboarding	3.95
Customer service	2.28



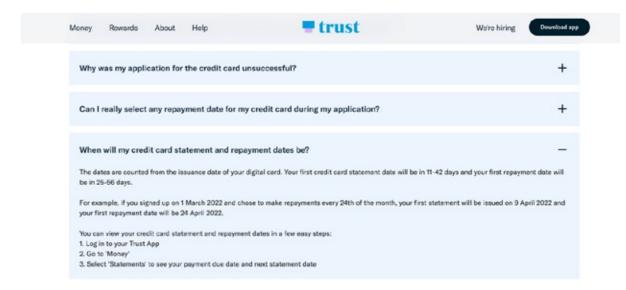
Improvements for Trust Bank

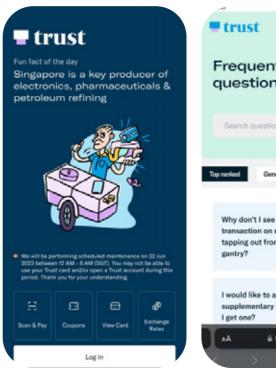
Ol Customer onboarding experience

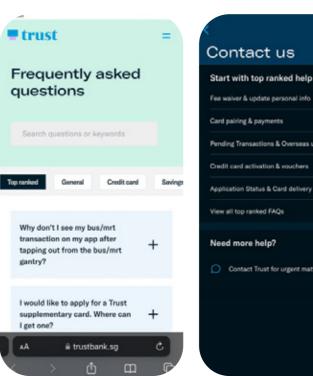
- Define clear account opening steps before starting the journey
- Allow for biometric verification during the account opening process
- Offer proper navigation guide on website for ease of browsing
- Allow signup for account opening on the website
- Allow non-users to browse products
- Provide both email and SMS OTP options for users
- Reduce number of account opening steps to 6 from 9 steps

Q2 Customer service experience

- Provide separate FAQ section within the app instead of redirecting to the browser
- Provide CTA for call/chat with customer support agent in FAQ section
- Offer visuals or meaningful icons in FAQ section
- Provide clear CTA to send an email to customer service on website
- Introduce an AI-Chatbot on the website and app
- Provide FAQ section with timestamp to let users know about the updated information
- Offer personalized IVR functions based on customer phone number and past IVR behaviour





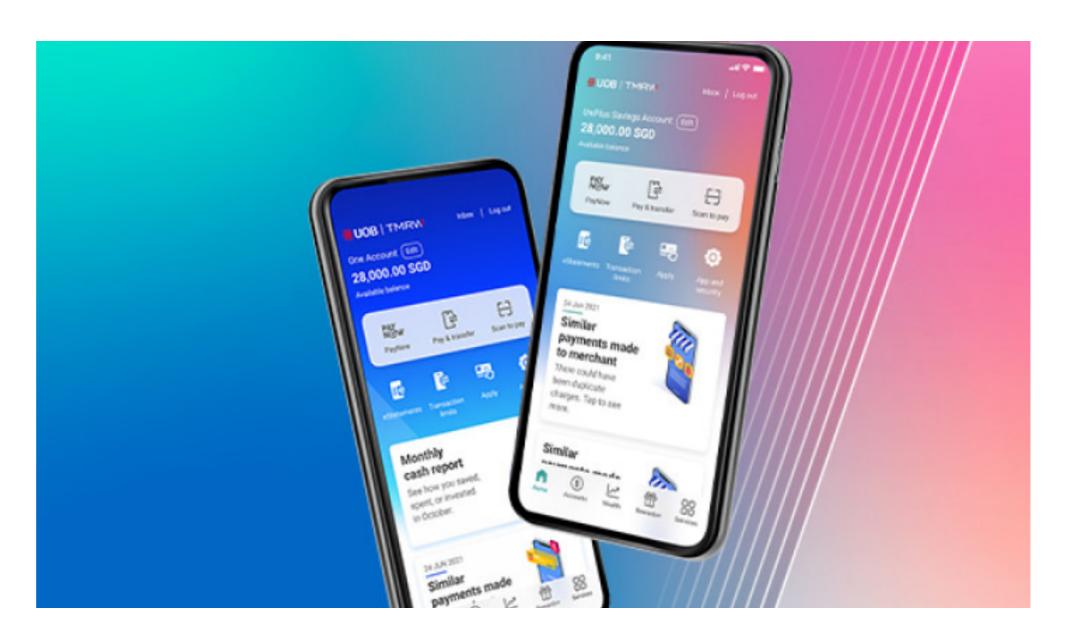




Deep dive into TDEX score for UOB



TDEX score	3.52
Mobile app	4.28
Customer onboarding	3.09
Customer service	3.18



Improvements for UOB

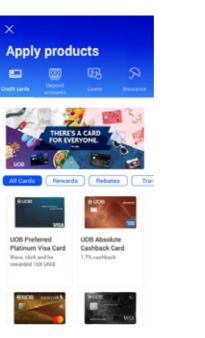
O1 Customer onboarding experience

- Allow a/c opening journey within the app instead of having a web-app
- Define number of a/c opening steps and document requirement before starting the journey
- Allow option for language selection in app
- Allow biometric verification to access the app during the a/c opening process
- Provide side-by-side customizable product comparison
- Reduce number of a/c opening steps to 6 from 9
- Offer instantly activated account with ready to use virtual card

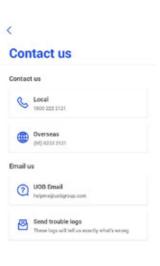
Q2 Customer service experience

- Provide separate FAQ section within the app instead of redirecting to the browser
- Reduce query response time via email, chat, social media
- Provide FAQ section with timestamp to let users know about the updated information
- Offer personalized IVR functions based on customer phone number and past IVR behaviour







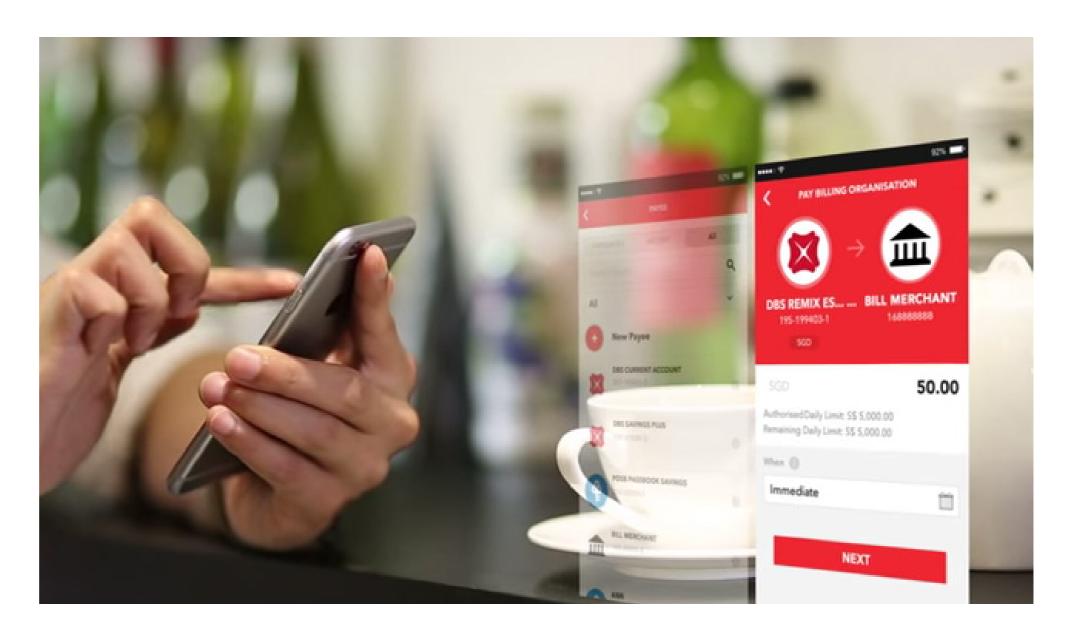




Deep dive into TDEX score for DBS



TDEX score	3.45
Mobile app	4.28
Customer onboarding	3.54
Customer service	2.52



Improvements for DBS

Ol Mobile app experience

- Define a/c opening steps and document requirement clearly before starting the journey in app
- Allow option for language selection in app
- Provide information and option to apply for other banking products like cards and loans in app
- Allow biometric verification to access the app during the a/c opening process

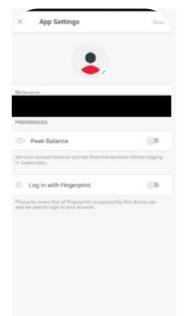
02 Customer onboarding experience

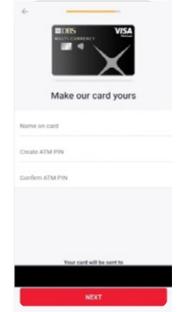
- Layout all account features with detailed information at first step (minimum balance, fees and charges etc.) within app
- Allow users to browse products even if they are not a customer
- Auto-fetch details from Singpass like name, occupation and tax residency to reduce steps
- Provide side-by-side customizable product comparison to help user evaluate the best account
- Offer instantly activated virtual card during the process

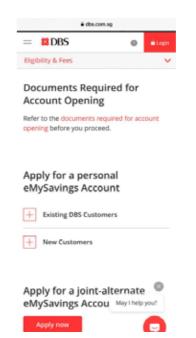
03 Customer service experience

- Provide customer service email on website i.e. accessible by all
- Offer a comprehensive updated FAQ section with visual aids in app
- Offer live-chat customer service and AI-chatbot in app
- Allow purchase of add-on value added services on IVR

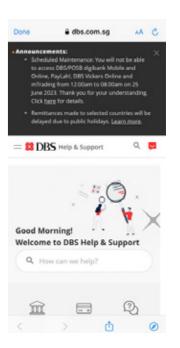








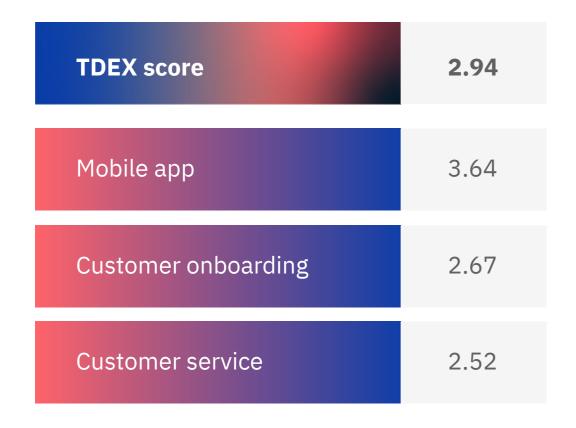


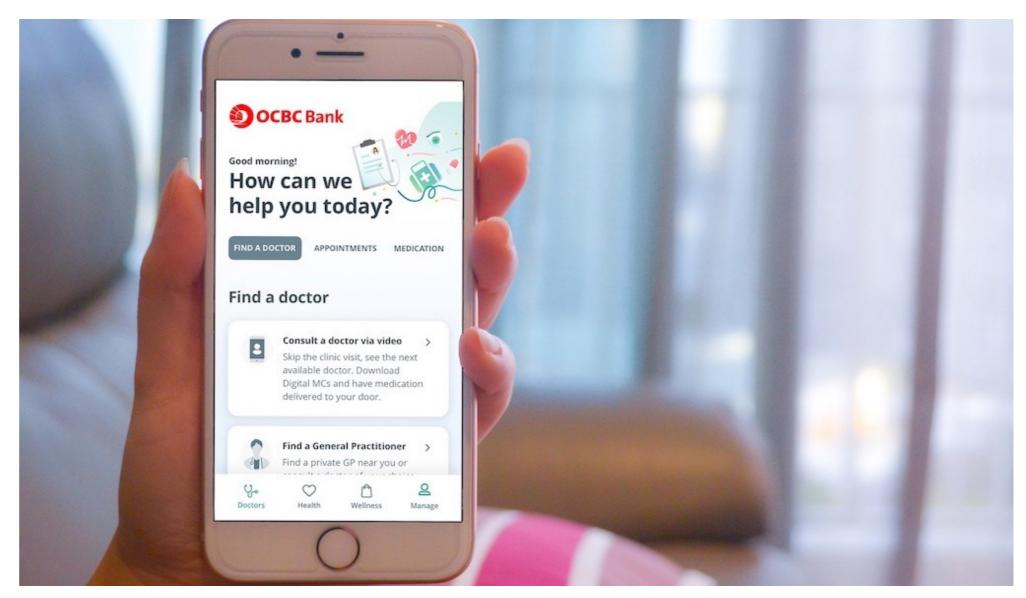




Deep dive into TDEX score for OCBC Bank







Improvements for OCBC Bank

Ol Mobile app experience

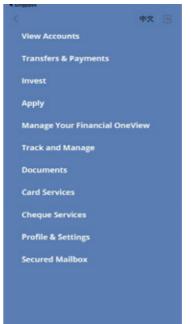
- Allow a/c opening process within the app instead of redirecting to browser
- Provide information and option to apply for other banking products like cards and loans within app
- Eliminate the need to re-login by reducing app loading time
- Allow option for language selection in app
- Allow for biometric verification during the a/c opening process

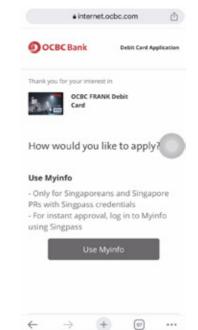
Q2 Customer onboarding experience

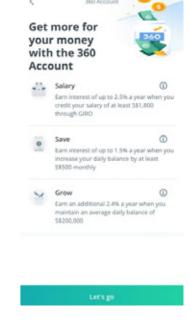
- Define account opening steps and document required before starting the journey in app
- Layout all account features with detailed information at first step (minimum balance, fees and charges etc.) within app
- Provide customisable account comparison on website
- Eliminate step like uploading signature
- Offer instantly activated account with ready to use virtual card
- Auto-fetch details like occupation and mother's name from Singpass

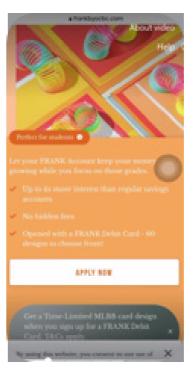
O3 Customer service experience

- Provide clear CTA for customer service email on website not just a secured email platform for only customers
- Upgrade FAQ section with visual aids and CTA for customer support within app
- Offer live-chat customer service and AI-chatbot in app
- Allow purchase of add-on value added services on IVR

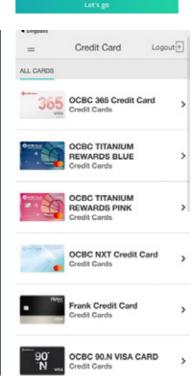










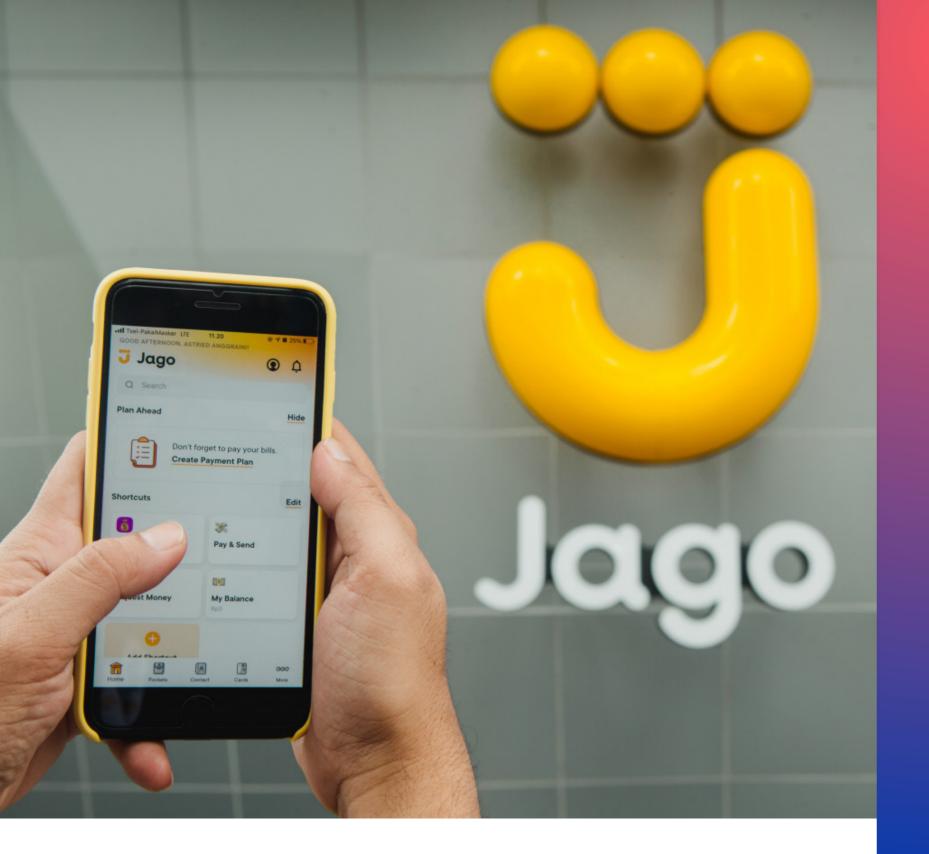








Best practices from peer region



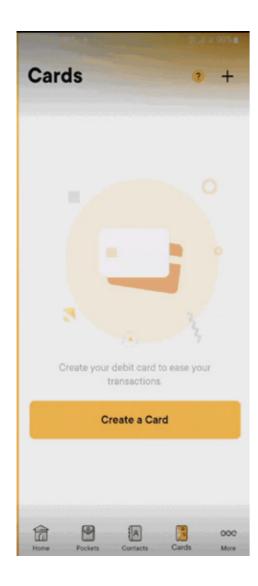
Case study 01

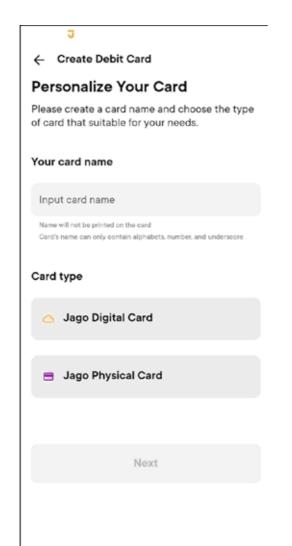
Indonesia's best digital banking app



Bank to ace digital banking app experience in Indonesia 3 Jago



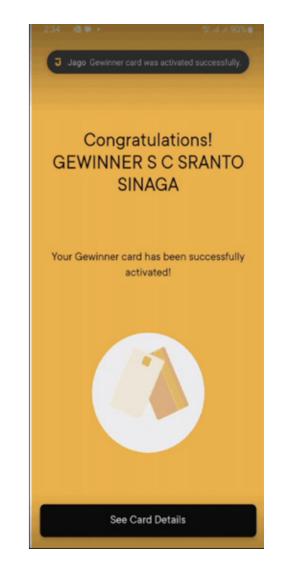






VISA Gewinner Lock Card Change Card is linked to this Pocket Gewinner

← Card Details



Create a customised debit card

Personalize your card – name, type

Virtual card name selection without need of manually entering name

Card details and services

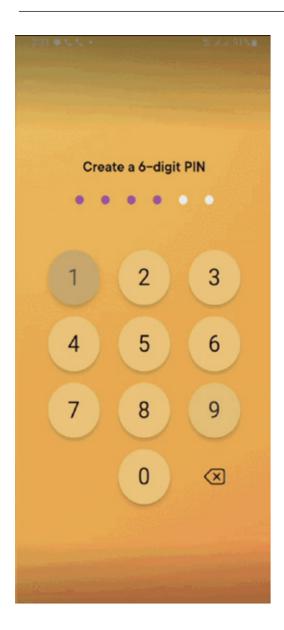
Instantly activated debit card



Bank to ace digital banking app experience in Indonesia 3 Jago



Set PIN



01 Consistent colour palette

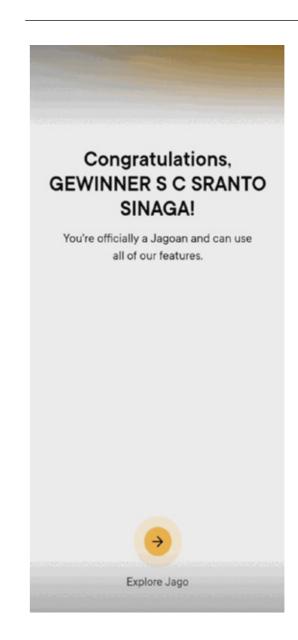
01 Asked during a/c opening process

Activate fingerprint



01 Set up biometric verification (optional)

Jago instant a/c activation



01 Clean, neat with optimum white space





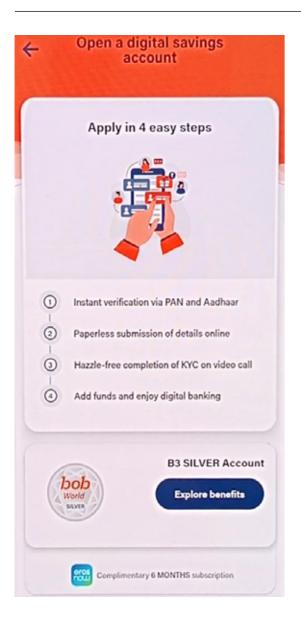
Case study 02

India's bank that ace "Customer onboarding experience"



Bank to ace "Customer onboarding experience" - Bank of Baroda

#1 Open a digital savings account



01

Clearly states 4 steps a/c opening journey with document requirement

02

Provide comprehensive information about different types of a/c's with cross-product benefits

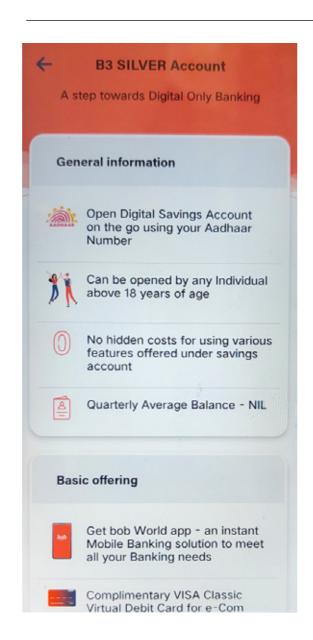
#2 Information about type of saving account

01

Provide information

QAB, virtual card etc.

like hidden costs.



#3 Account opening process



01

Number of account opening steps clearly mentioned



Bank to ace "Customer onboarding experience" - Bank of Baroda

#4 Auto-fetched details



01

Option to go to previous step

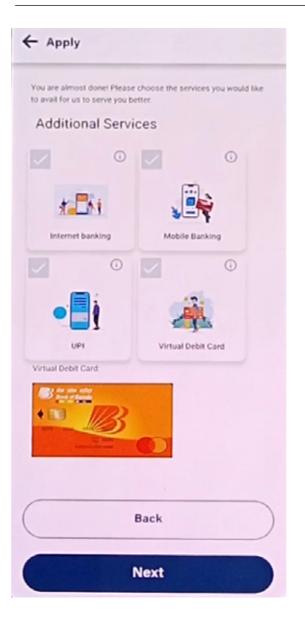
02

Display % of journey completed

03

Auto-fetch Aadhar details and address

#5 Additional services



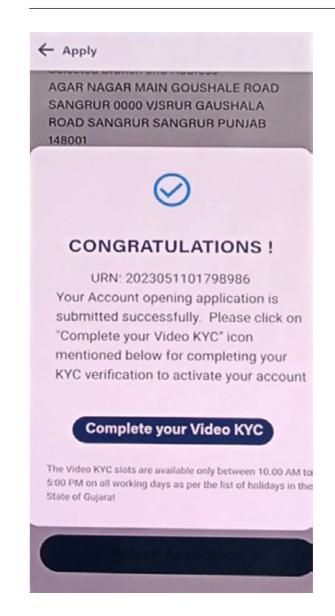
01

Auto-selected additional services like UPI, virtual card etc.

02

Informs about virtual debit card during the a/c opening process

#6 Account opened



01

Instant account opening

02

Clear CTA to proceed for video KYC

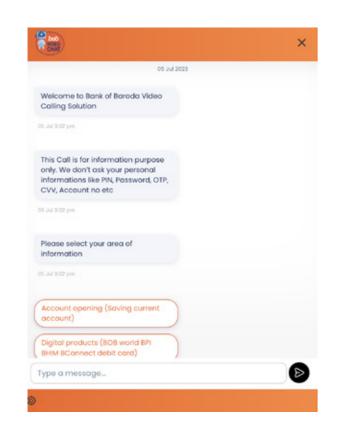




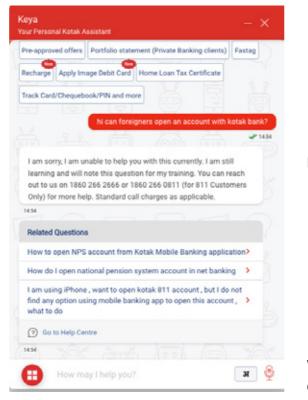
Case study 03

Indian banks to ace customer service experience

Best examples for 'customer service experience' from Indian banks



BOB video chat with human interaction



Kotak AI-chatbot - Keya

Voice option to communicate with chatbot



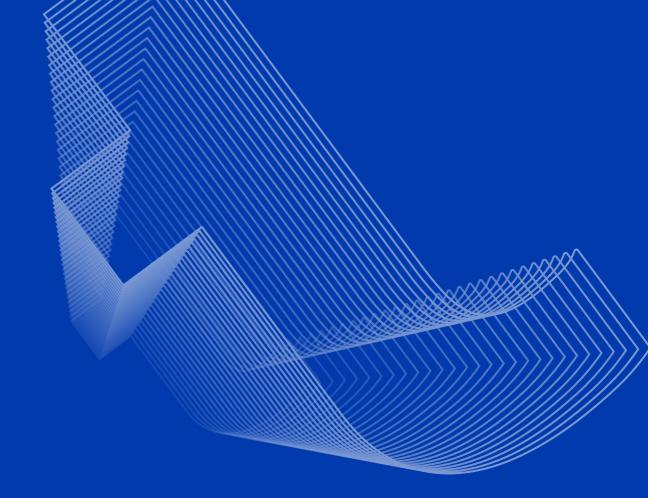
Axis bank multiple customer support channels



Clear CTA to sign-up for WhatsApp banking







We help build and grow purpose-driven businesses

reachus@twimbit.com www.twimbit.com