



Introduction to Open Banking & the Metaverse

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Date: October 20, 2023

Agenda

- ❑ What is Open Banking?
- ❑ Open Banking: Evolution & Benefits
- ❑ Open Banking: Banks vs. Fintechs
- ❑ Business Banking Client Challenges
- ❑ Introducing: **TD Embedded Banking Solution**
- ❑ Client Value Proposition
- ❑ TD Embedded Banking Products & Roadmap
- ❑ What is the Metaverse?
- ❑ Metaverse in Numbers
- ❑ Metaverse Benefits
- ❑ Banking in the Metaverse

Open Banking: An Introduction

What is Open Banking?

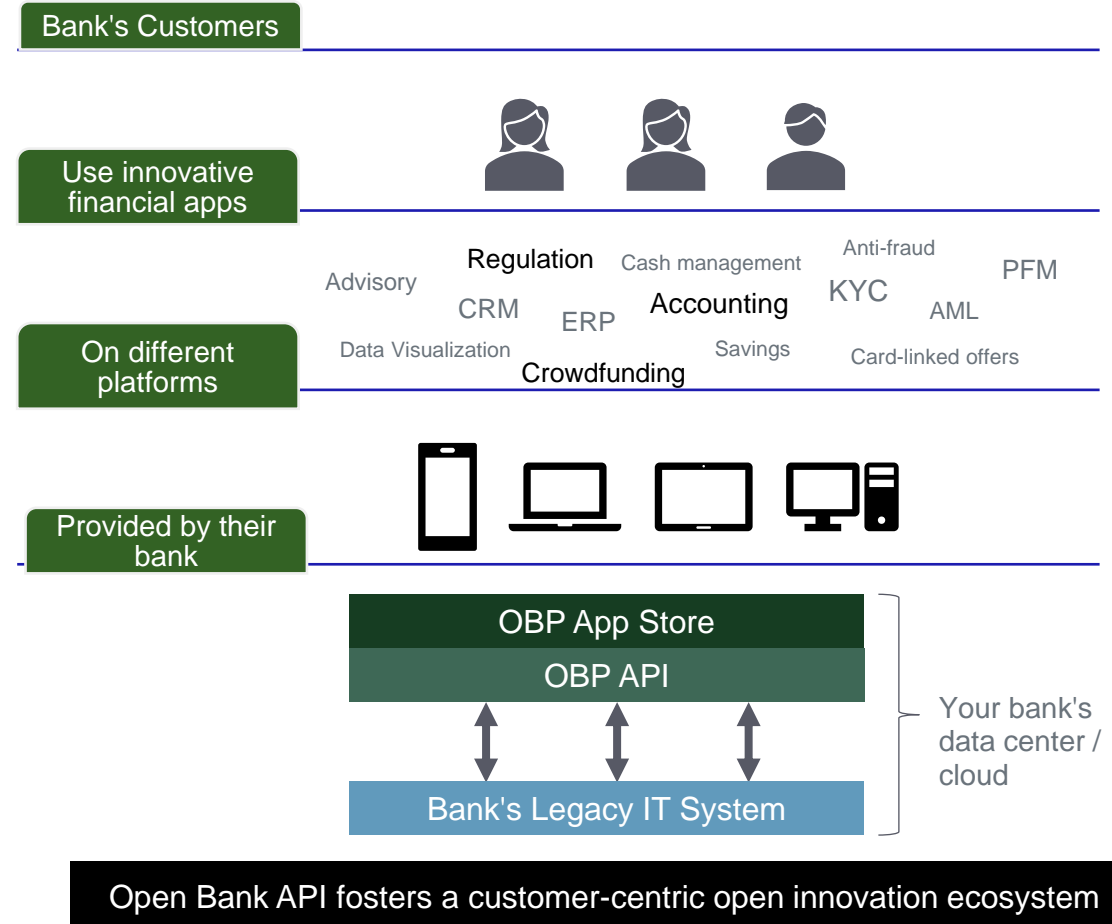
A system under which banks open their APIs to third parties upon customer consent to create new products and services

Open Banking represents a significant opportunity to innovate and transform core services



How it Works:

1



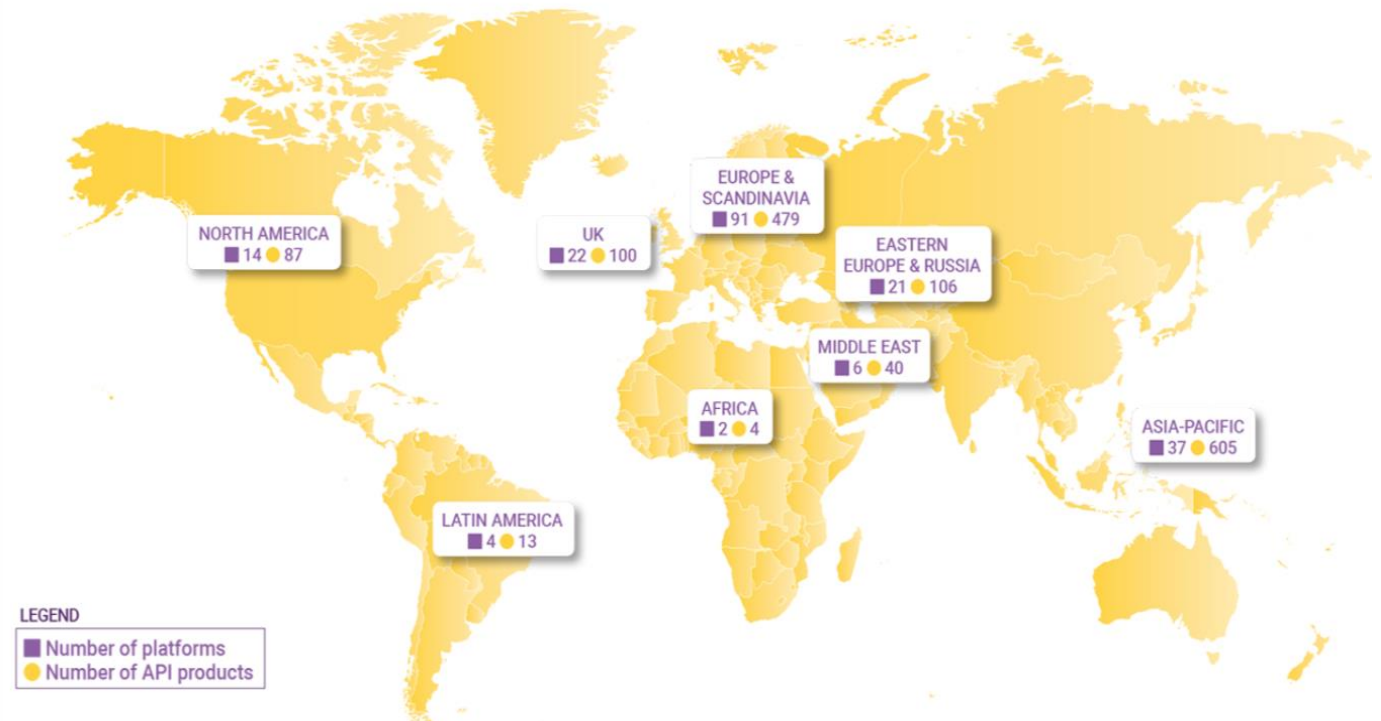
Evolution of Open Banking

Macroeconomic forces have contributed to the evolution of Open Banking; Global adoption has skyrocketed with FIs launching APIs/API enabled products and services rapidly since 2018

	<p>New regulations such as PSD2 are ushering in Open Banking</p>
	<p>New technological Innovations especially push to instant payments are driving demand for Open Banking</p>
	<p>Evolving consumer expectations with a desire for frictionless experiences, 24x7 availability and real time convenient services</p>
	<p>Competitive pressure emanating from emergence of Fintechs, neo/challenger banks & incumbent banks launching API portals</p>



Open Banking Platforms by region (N=197)



KEY DATA POINTS:

19% ↑

Growth in Banks with API platforms over Q4 2019

58% ↑

Growth of API products from banks over Q4 2019

72% 

World's top 50 largest banks by market cap have an API platform.

Benefits of Open Banking

The benefits of Open Banking are numerous: paving the way for net new business models and revenue streams



Innovative products & Services



Customized & relevant product offerings



Increased customer engagement



3 Real time view of cash positions of a business/enterprise leading to operational efficiencies

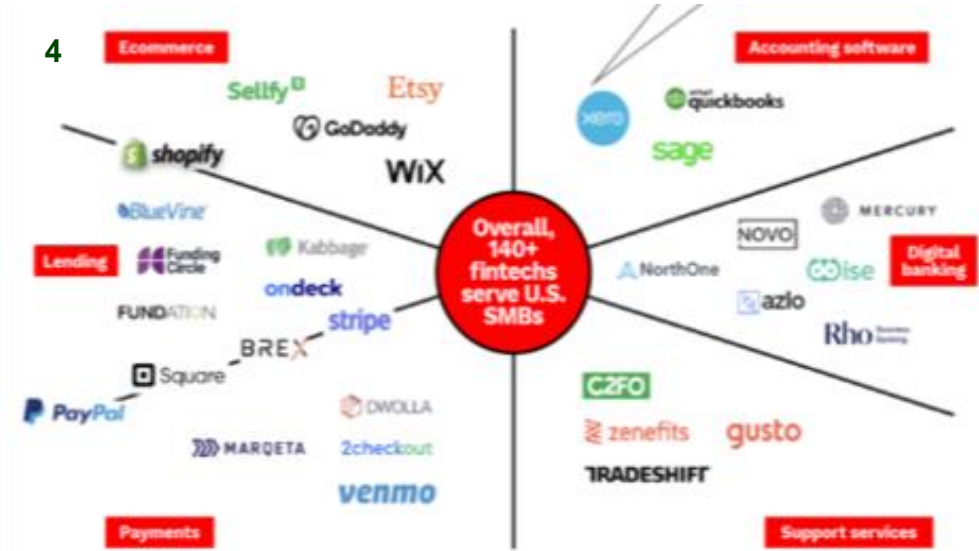


Increased speed to market for products and services

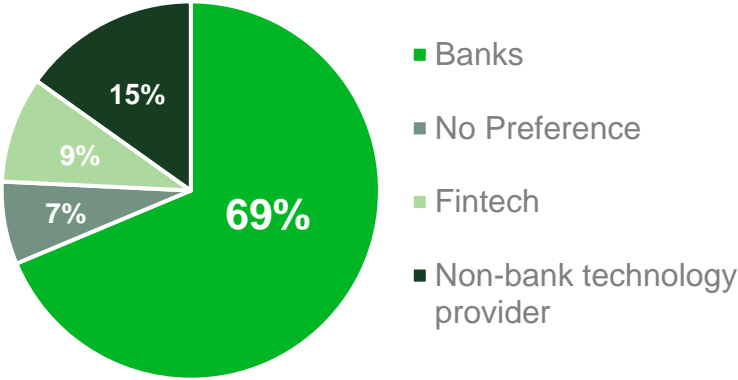
Model	Description	Examples
1. New services	Creating new services that access customer data from other banks and financial institutions or to extend services provided	Budgeting, Cash Management, Accounting Software Services
2. New channels	Accessing third party audiences by placing your provider or service within another's context	Incorporating into account packages, Alibaba for cashflow, foreign exchange, payments through social channels
3. New utilities (As-a-Service)	Providing a new utility or service to the market	BBVA/Solaris Bank opening platforms and APIs to launch Banking-as-a-service, Goldman Sach's Banking-as-a-service
4. New platforms	Enabling third parties to connect with banks and other services and innovate	Net new platforms being launched by financial services companies promoting financial and non-financial products & services, marketplace model by DBS

Banks versus Fintechs

A plethora of Fintechs offer Open Banking capabilities; the bank is still the safest way for enabling connectivity



Global Corporate & SMBs' Preference of Open Banking Ecosystem Provider



Key Stats

~85%+ clients are ready for a new era of open banking / data sharing

72% of Large Corporations interested in an Open Banking platform

65% of SMEs are interested in an Open Banking platform

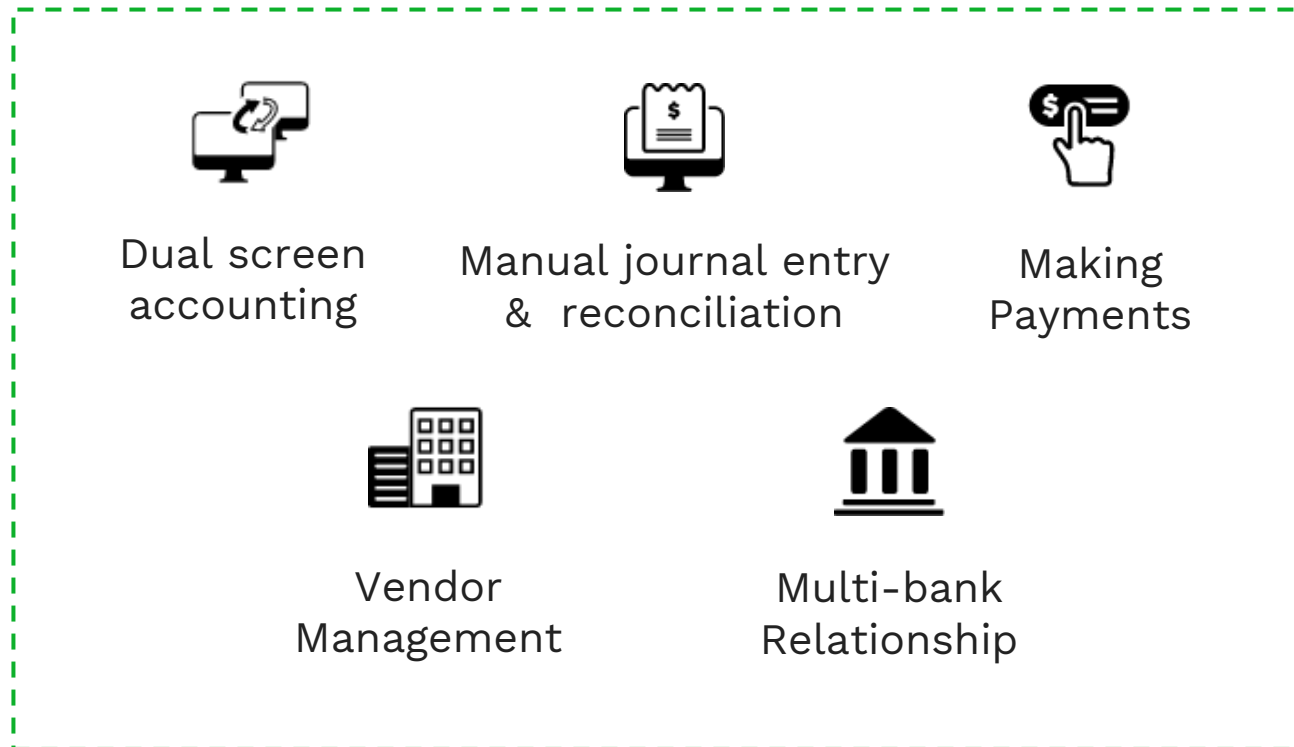
Of these, 69% prefer their banking institution be a provider of Open Banking opportunities

Business Banking Client Challenges

Clients struggle with manual entries and daily reconciliation surrounding Accounts Payables & Receivables

Accounting and Finance professionals **struggle** with

Which **means**?



Time Wasted + Human Error

= Inefficiency

Introducing: The TD Embedded Banking Solution

What is TD Embedded Banking?

Commercial clients use **Enterprise Resource Planning Software (ERP)** to manage business processes.

➔ **Embedded Solution**

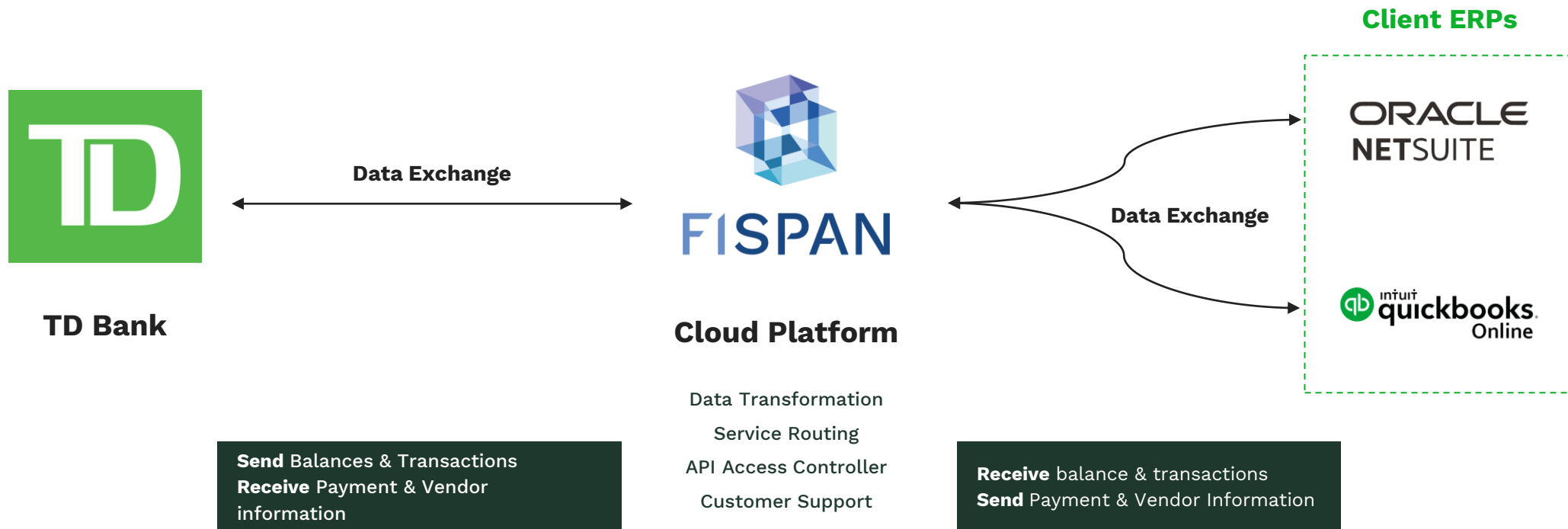
Business banking clients use **Accounting Software** to manage their financials.

➔ **Companion App**

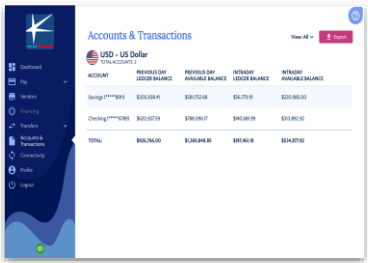


TD / Fispan Partnership for Embedded Banking

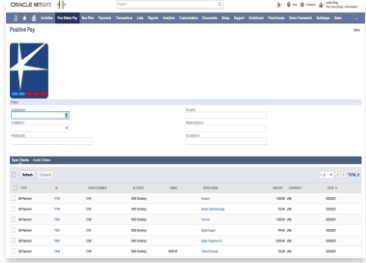
The TD Bank Connector powered by Fispan allows TD to connect to multiple client ERP systems / Accounting Softwares



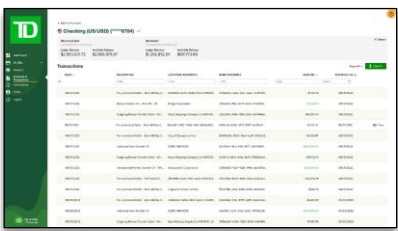
TD Products LIVE in NetSuite & QuickBooks Online



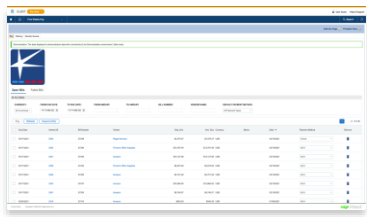
Balance & Transaction Reporting



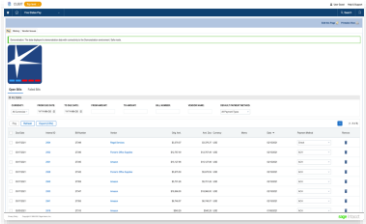
Positive Pay



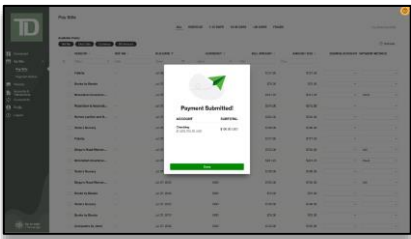
Balance & Transaction Reporting



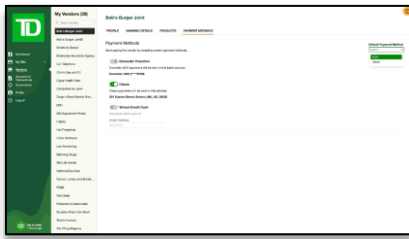
ACH



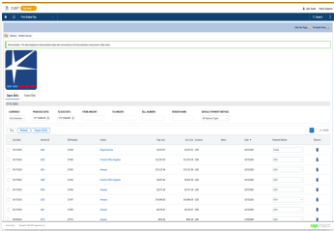
Check Print



ACH

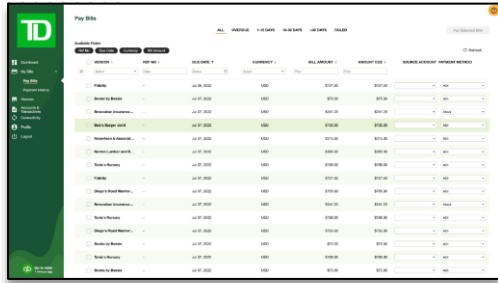


Check Print



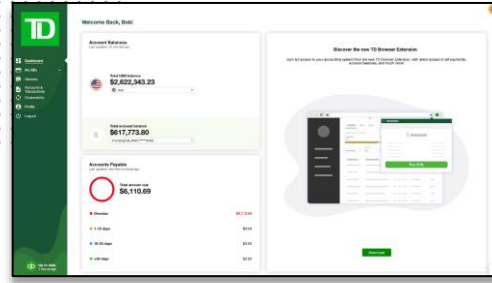
Bank Feed

TD Products COMING SOON! In NetSuite & QuickBooks Online



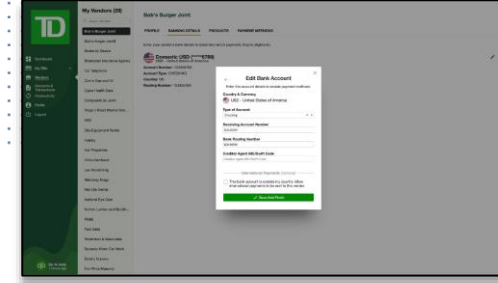
Additional Payment Types

Additional payment methods including Wire, Virtual credit cards, and Check.



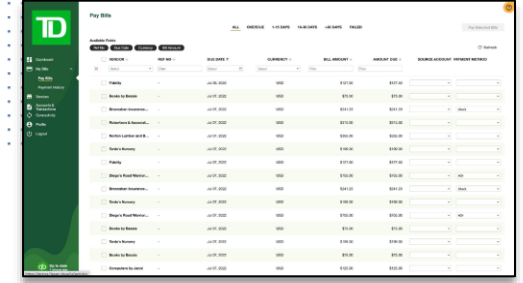
Account Transfers

Bank clients will be able to access their available funds and easily transfer balances from any one of their bank accounts to another.



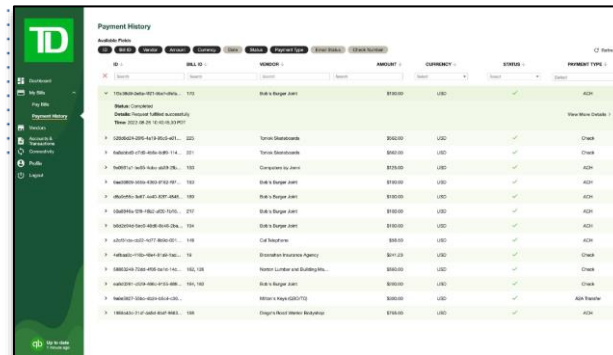
Check Images

Embedded directly into the ERP environment via the FISPAN plugin, clients will be able to view their check images and verify information.



Domestic Wires

Allows for the payment of bills through domestic wire transfers.



Positive Pay

Populates a list of checks printed in-house for which Positive Pay files can be transmitted directly to the bank from the user's ERP.

Client Value Proposition



Smart Integration

Integrates behind the scenes with ERP/Accounting software to bring together live banking and accounting Data. No IT lift required from TD Bank or end user.



Easy Payment

Directly pays bills through TD Bank accounts via ACH.



Real-time Transaction Information

See previous day and intraday balances with near real-time transaction information directly from the bank.



Automatic Journal Entry & Reconciliation

Avoids accidental dual entry, keeps books consistent and automates reconciliation.



Easy Vendor Management

Pulls vendor information from accounting software where additional data can be added anytime.



Save Time & Money

Save time on making payments, accounting and audit hours.

Metaverse: An Introduction

What is the Metaverse?

Metaverse is a unified immersive experience brought to life by the convergence of multiple technologies:



*Augmented Reality (AR)
& Virtual Reality (VR)*



Blockchain



Artificial Intelligence (AI)



*Non-fungible Tokens
(NFTs)*



3D Reconstruction



Web 3.0



Crypto Currency



Internet of Things (IOTs)

Metaverse in Numbers

\$5 Trillion⁵

Expected Metaverse value by 2030

95%⁶

Business Leaders expect a positive impact on their industry in next 5-10 years

60%⁸

Of consumers familiar with Metaverse engage in Metaverse activities today

\$120B+

Investment flow
Metaverse 2022

79%

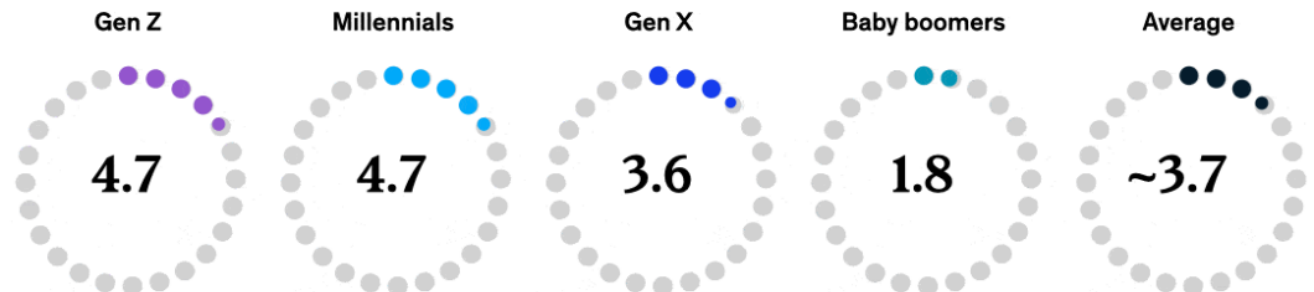
Of consumers active
on Metaverse made
a purchase

>15%

Corporate revenue
expected in 5 years per
25% Senior Executives

U.S Consumers to spend almost 4 hours per day in the next 5 years in Metaverse⁹

Expectations of time spent in metaverse in 5 years, by generation,¹ hours per day

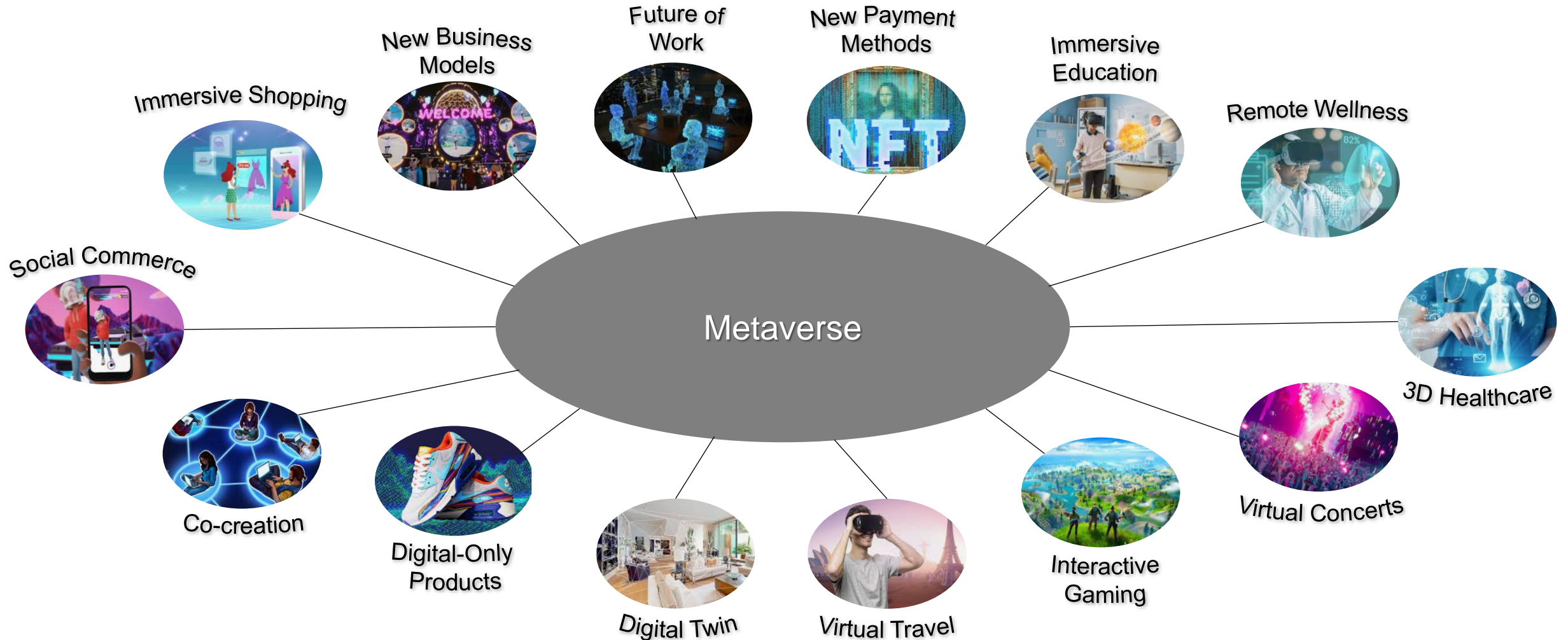


Source: McKinsey Metaverse Consumer Survey (Feb 2022)

Source 5,6,7,8: McKinsey: Value creation in the Metaverse; 9 Source: McKinsey: Myths of the Metaverse

Metaverse Benefits

The Metaverse will offer consumers and businesses enhanced experiences and opportunities and impact every facet of our future lives



Banking in the Metaverse

Use Case: Bank Storefront/Branch

Application:

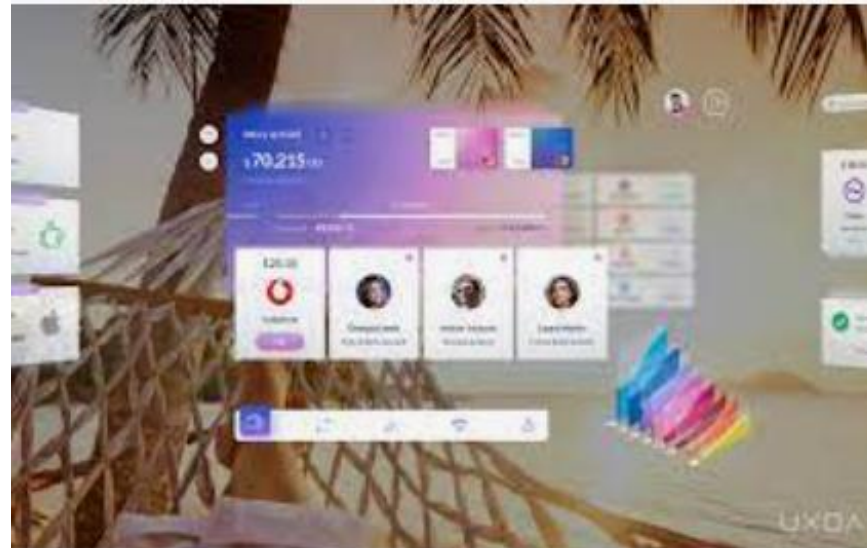
- Avatars provide immersive customer support in virtual branch/store
- Payments/mortgages/insurance products transacted via crypto currencies, digital assets and NFTs
- Extend bank footprint / services in virtual world



Use Case: Banking App

Application:

- Perform self-service transactions in VR
- Securely converse with bankers in trusted transaction space
- Meet customers in their channel of choice and engagement



Banking in the Metaverse

Use Case: AI Customer Service

Application:

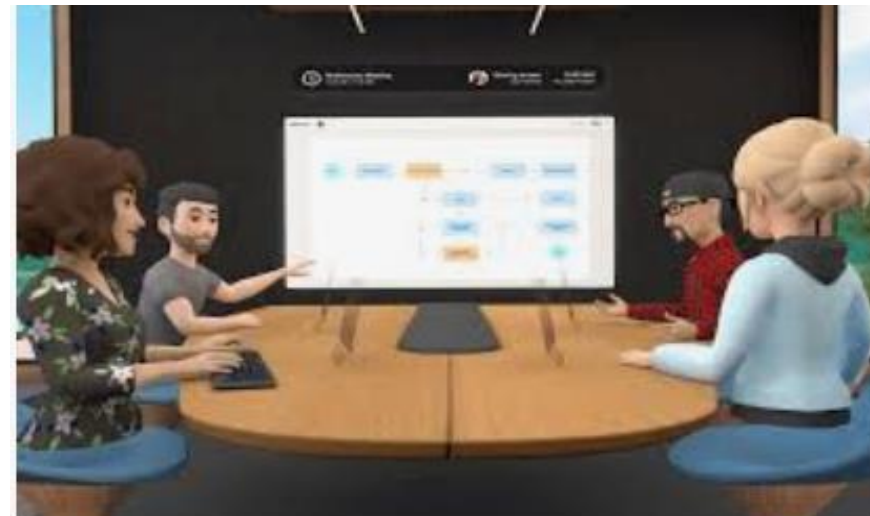
- AI based avatar provide real time assistance replicating branch/call center support issues
- Virtual ATMs provide advice and troubleshoot customer support issues
- Offer financial education and enhance banking experience for clients



Use Case: AI Advice/Relationship Management

Application:

- Deliver personalized experiences/advice to clients for complex products such as wealth management, insurance and business banking
- Provide high touch 1:1 advice via virtual medium
- Enhanced customer engagement
- Offer financial advice and education transforming the banking experience



Banking in the Metaverse

Use Case: Marketing & Advertising

Application:

- Opportunity to extend brand in unlimited ways
- Opportunity to target customers not in traditional footprint
- Opportunity to capture untapped customer segments
- New channel to sell digital only products/services



Use Case: Training & Simulation

Application:

- Emulate on-the-job scenarios through mixed and virtual reality/use of Avatars curating realistic trainings
- Easily scalable training scenarios
- Trainings deliverable to a larger mass
- Complex trainings delivered via holographic simulation



Banking in the Metaverse

Use Case: Virtual Meetings

Application:

- Collaborative meeting spaces bridge gap created by remote work by bringing colleagues together
- Reduce pressure of video calls via Avatars
- Allows for personalization in the workspace



Use Case: Remote Work

Application:

- Promote Cross team and cross disciplinary communication and collaboration via simulated coworking spaces
- Collaborate with team members globally
- Encourages content, collaboration and co-creation



Thank You