REVOLUTIONISING ROBO

UNLOCKING THE POTENTIAL FOR ROBO-ADVISORS

JULY 2022

QUINLAN
&ASSOCIATES

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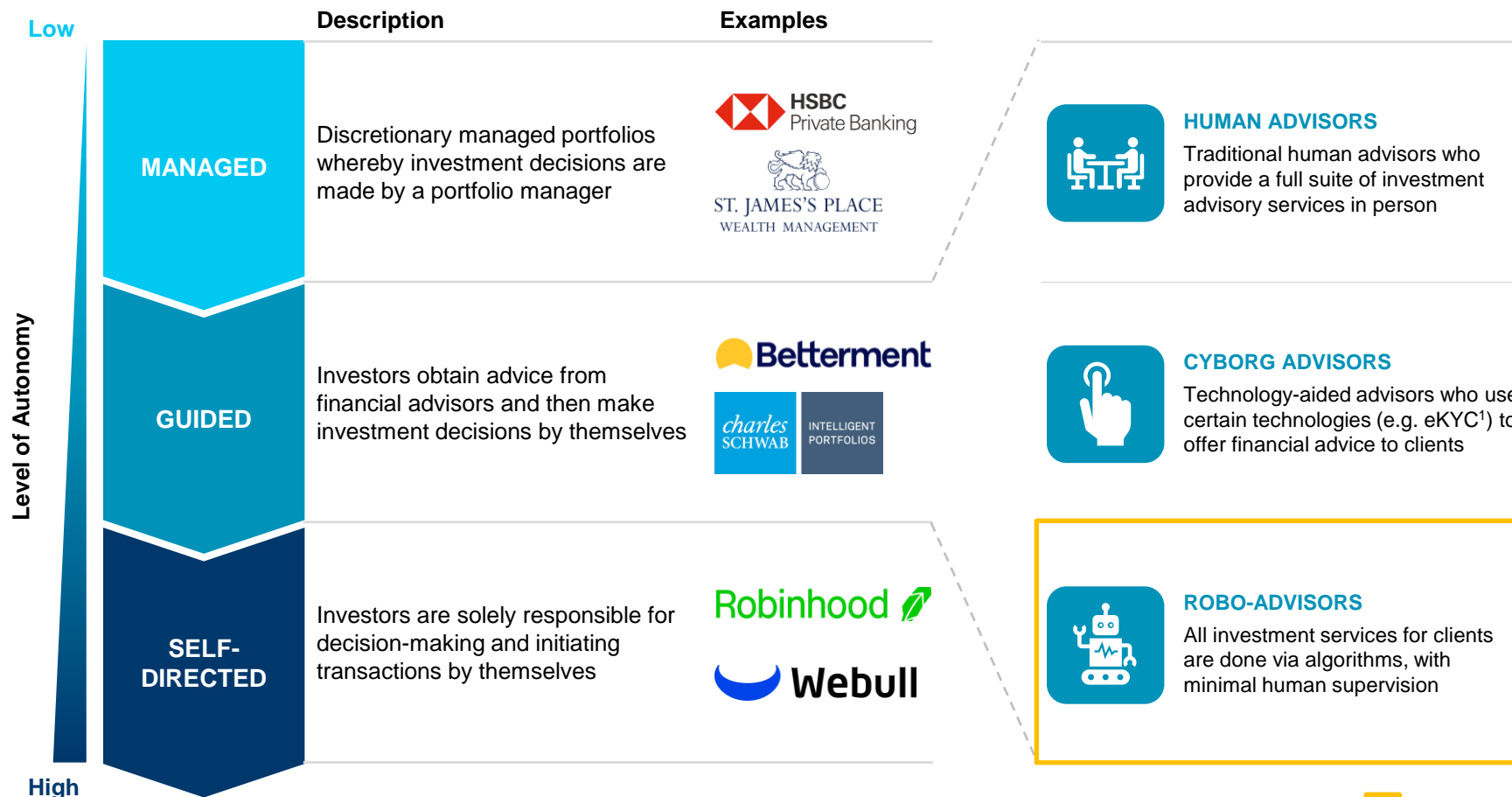# SECTION 1

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EUPHORIA

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THE WEALTH MANAGEMENT LANDSCAPE

Within the wealth management ecosystem, there are three distinct service models that are being offered by traditional and/or new age players to serve their customers

Service Models
Wealth Management

Level of Autonomy — Low (top) to High (bottom)

	Description	Examples
MANAGED	Discretionary managed portfolios whereby investment decisions are made by a portfolio manager	HSBC Private Banking / ST. JAMES'S PLACE WEALTH MANAGEMENT
GUIDED	Investors obtain advice from financial advisors and then make investment decisions by themselves	Betterment / charles SCHWAB INTELLIGENT PORTFOLIOS
SELF-DIRECTED	Investors are solely responsible for decision-making and initiating transactions by themselves	Robinhood / Webull

HUMAN ADVISORS
Traditional human advisors who provide a full suite of investment advisory services in person

CYBORG ADVISORS
Technology-aided advisors who use certain technologies (e.g. eKYC[1]) to offer financial advice to clients

ROBO-ADVISORS
All investment services for clients are done via algorithms, with minimal human supervision

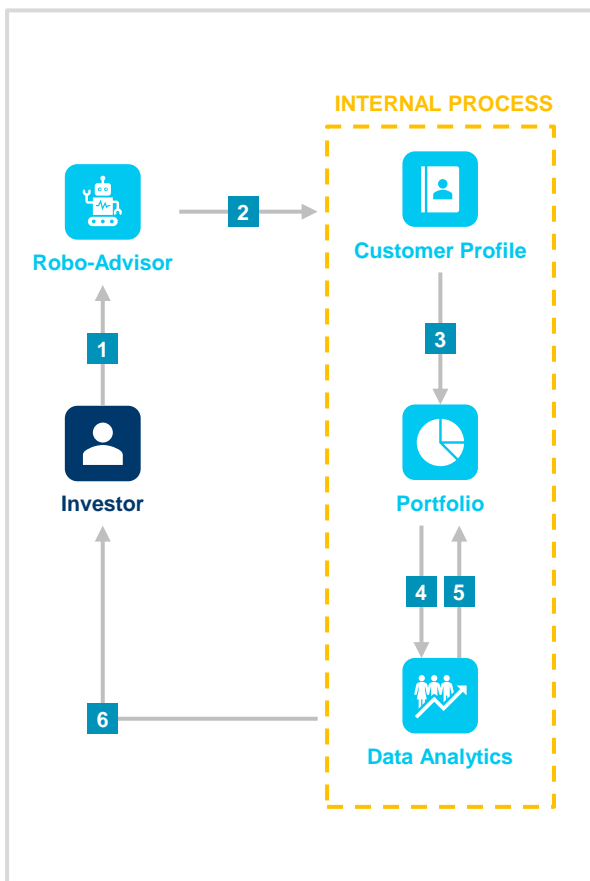☐ Core Focus

[1]Know Your Customer
Source: Quinlan & Associates analysis

ROBO-ADVISORY SERVICE MODEL

Robo-advisors, in particular, enjoy certain advantages over other traditional service models, elevating their service proposition to investors
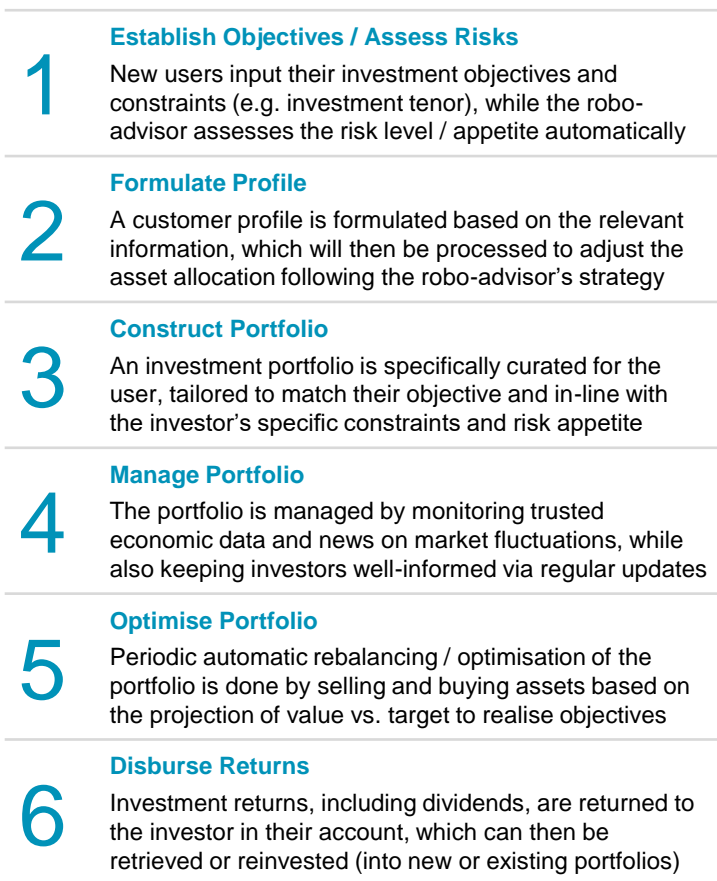
Robo-Advisors
Process Overview

INTERNAL PROCESS

Robo-Advisor

2 →

Customer Profile

1 ↑

3 ↓

Investor

Portfolio

4 5

6

Data Analytics

Investment Process
Value Chain

1 **Establish Objectives / Assess Risks**
New users input their investment objectives and constraints (e.g. investment tenor), while the robo-advisor assesses the risk level / appetite automatically

2 **Formulate Profile**
A customer profile is formulated based on the relevant information, which will then be processed to adjust the asset allocation following the robo-advisor's strategy

3 **Construct Portfolio**
An investment portfolio is specifically curated for the user, tailored to match their objective and in-line with the investor's specific constraints and risk appetite

4 **Manage Portfolio**
The portfolio is managed by monitoring trusted economic data and news on market fluctuations, while also keeping investors well-informed via regular updates

5 **Optimise Portfolio**
Periodic automatic rebalancing / optimisation of the portfolio is done by selling and buying assets based on the projection of value vs. target to realise objectives

6 **Disburse Returns**
Investment returns, including dividends, are returned to the investor in their account, which can then be retrieved or reinvested (into new or existing portfolios)

Key Benefits
Overview

✓

AFFORDABLE
Low management fees and minimum balance requirements allow mass retail investors to access

✓

DIGITAL-FIRST
All services are digital-centric with seamless UI / UX[1] that attracts tech-savvy youngsters

✓

CUSTOMISED
Risk-based, goal-based, and/or theme-based customisation is available for the mass market
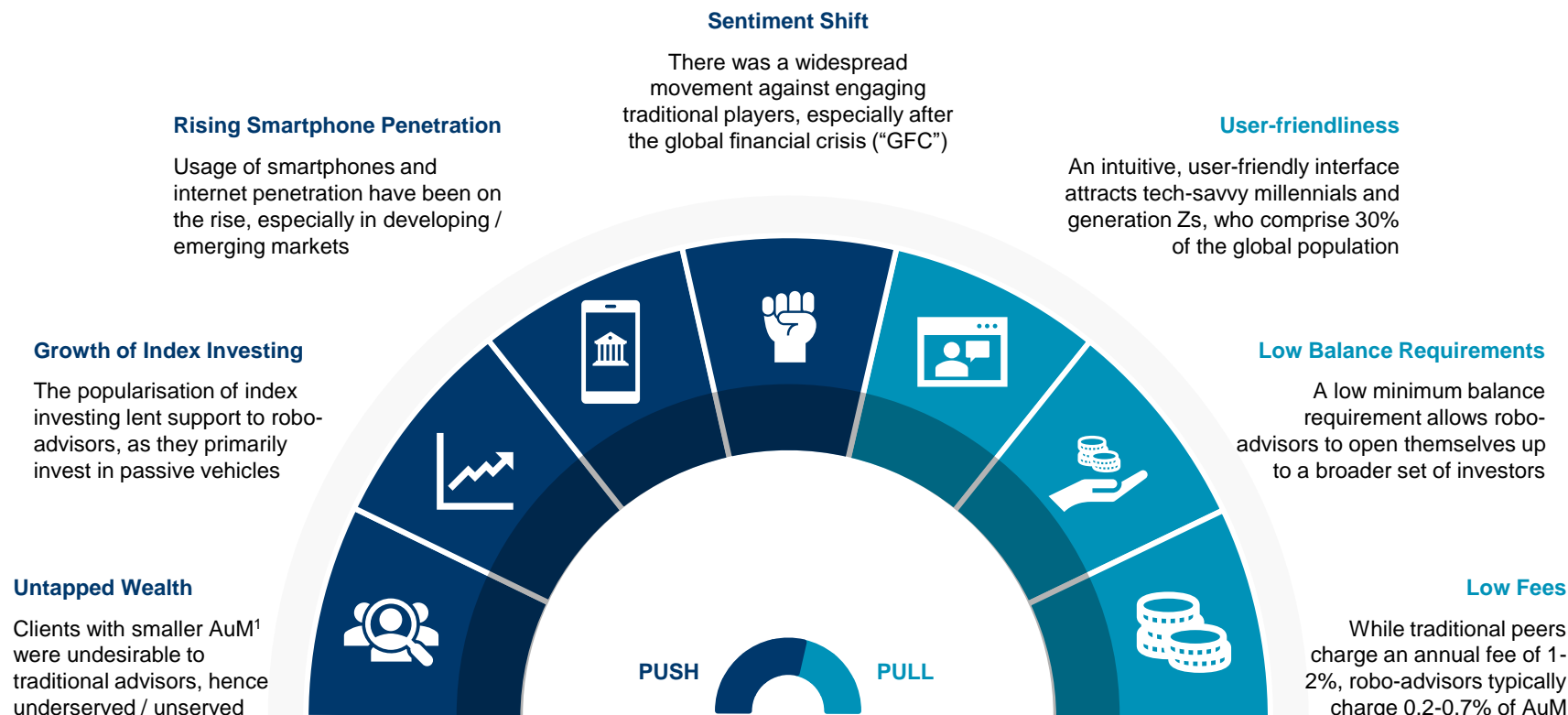
[1]User Interface / Experience
Source: Quinlan & Associates analysis

GROWTH DRIVERS

Armed with such competitive benefits and propelled by a myriad of push and pull factors, many robo-advisors have witnessed rapid growth in recent years
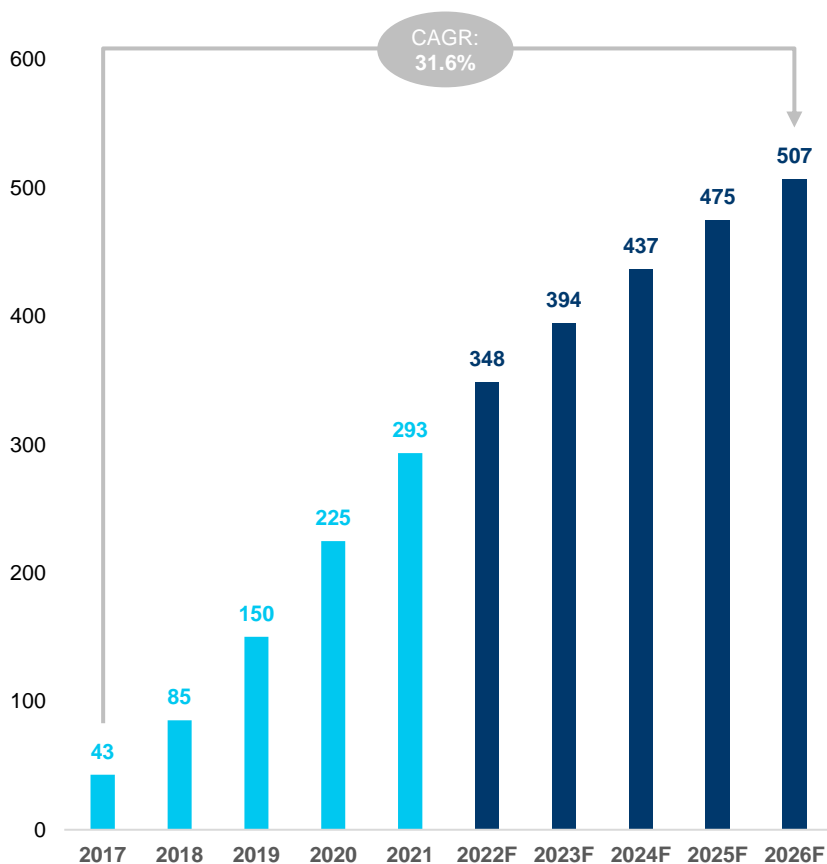
Key Tailwinds
Push and Pull

Sentiment Shift

There was a widespread movement against engaging traditional players, especially after the global financial crisis ("GFC")

Rising Smartphone Penetration

Usage of smartphones and internet penetration have been on the rise, especially in developing / emerging markets

User-friendliness

An intuitive, user-friendly interface attracts tech-savvy millennials and generation Zs, who comprise 30% of the global population

Growth of Index Investing

The popularisation of index investing lent support to robo-advisors, as they primarily invest in passive vehicles

Low Balance Requirements

A low minimum balance requirement allows robo-advisors to open themselves up to a broader set of investors

Untapped Wealth

Clients with smaller AuM[1] were undesirable to traditional advisors, hence underserved / unserved

Low Fees

While traditional peers charge an annual fee of 1-2%, robo-advisors typically charge 0.2-0.7% of AuM

PUSH   PULL

[1]Asset under Management
Source: robo-advisor websites, Schroders, Quinlan & Associates analysis

WALLET OPPOTUNITY

By 2021, robo-advisors globally had amassed 293 million users managing USD 1.4 trillion in AuM, with robust growth anticipated to continue well into 2026

User Count
Million, 2017 – 2026F

CAGR: **31.6%**

Year	Value
2017	43
2018	85
2019	150
2020	225
2021	293
2022F	348
2023F	394
2024F	437
2025F	475
2026F	507

AuM
USD Trillion, 2017 – 2026F

CAGR: **29.8%**

Year	Value
2017	0.3
2018	0.5
2019	0.8
2020	1.1
2021	1.4
2022F	1.8
2023F	2.2
2024F	2.5
2025F	2.8
2026F	3.1

Historical   Forecast

Source: Statista, Quinlan & Associates analysis
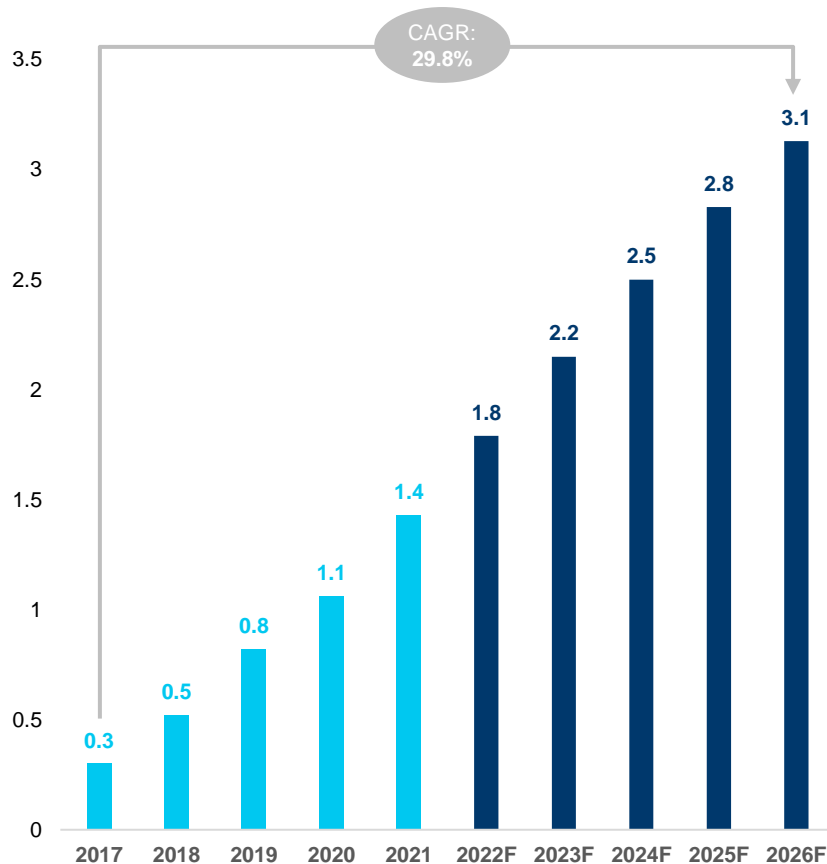
SECTION 2

SUBSEQUENT PULLBACK

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STUMBLING BLOCKS

Despite rapid top-line growth, there are several roadblocks that are threatening the monetisation potential of robo-advisory firms, especially the turnaround of legacy peers

Major Challenges
Robo-Advisors

1 **Shallow Client Relationships**
Lack of an emotional connection and a trust deficit with clients, due to algorithmic aversion and low personalisation

2 **Lack of Active Investments**
Focus on passive investments (e.g. index-tracking products), due to insufficient capabilities to support active strategies

3 **Strong Comeback from Legacy Peers**
Traditional competitors have entered the robo-advisory fray as well and are disrupting the disruptors

Legacy Peers
Competitive Advantages
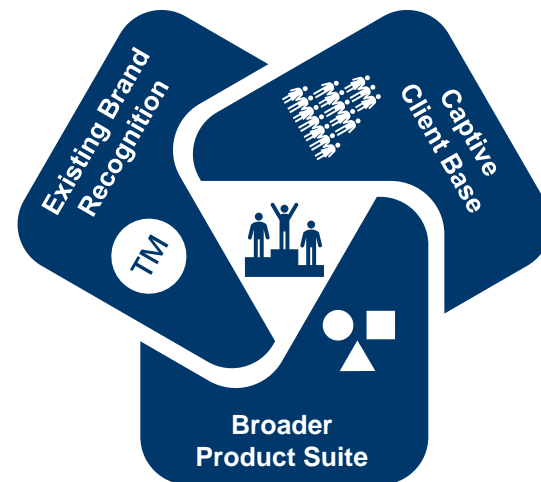
1 **Existing Brand Recognition**
The brands of traditional competitors are well recognised by clients and regarded to be more trustworthy than robo-advisors

2 **Captive Client Base**
Traditional competitors have a large existing client base, which they can more easily transition to a low touch model

3 **Broader Product Suite**
Legacy players have wider product capabilities, allowing them to offer a greater variety of products (e.g. private investments)

COMPETITIVE LANDSCAPE

Indeed, although new-age robo-advisors may have been first to market, with a view to disrupt their legacy peers, traditional players have in-turn disrupted the disruptors

AuM By Robo-Advisor
USD Billion, Q1 2022

Edelman Financial Engines™	290.4
Vanguard Personal Advisor Services	268.0
charles SCHWAB INTELLIGENT PORTFOLIOS	76.1
Betterment	33.8
personal CAPITAL AN EMPOWER COMPANY	24.9
wealthfront	22.9
Wealthsimple	15.9
acorns	6.2
blooom	5.6
M1 Finance	5.0
SIGFIG	2.3
FutureAdvisor	1.8
EV ELLEVEST	1.4

0   100   200   300

Legacy peers dwarf independent robo advisors in terms of their overall AuM

Market Share
%, 2022

84%...
...of the market share is dominated by legacy players

Legacy Peers' Robo-advisors

Longstanding traditional wealth managers that have expanded to offer robo-advisory services in a hybrid / fully-digital model

New-age Robo-advisors

Digitally native robo-advisors that created a digital-first service model to disrupt legacy peers

■ Legacy   ■ New-age

Source: ThinkAdvisor, company websites, Quinlan & Associates analysis

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CASE STUDY – VANGUARD PERSONAL ADVISOR SERVICES

Take the example of Vanguard, a traditional incumbent that has launched its robo-advisory offering to emerge as the second largest player by AUM, dwarfing new-age disruptors

Case Study
Vanguard Personal Advisor Services

Vanguard®

Established in 1975, Vanguard started as a traditional investment management company. In 2015, Vanguard launched its hybrid robo-advisory service for retail investors, called Personal Advisor Services.

USD 268bn
AuM, Q1 2022

Vanguard Personal Advisor Services
Description

Management Fee

Management fee is 0.30% of AuM for up to USD 5 million, tiered down to 0.05% for AuM of USD 25 million

With a tiered pricing model and service, investors are encouraged to invest greater sums with Vanguard

Minimum Balance

Minimum account size is USD 50,000, which is significantly higher than the majority of robo-advisors

With a relatively higher AuM contribution per investor account, Vanguard has a sizeable revenue base

Service Tiers
By AuM

1

USD 50,000 – 500,000

Accounts with an AuM of USD 50,000-500,000 are assigned to a group of advisors curating personalised financial plans, providing investment coaching, ongoing portfolio advice, and much more

2

USD 500,000 – 5 MILLION

Accounts with an AuM of USD 500,000-5 million are entitled to their own dedicated advisor providing the same set of services (e.g. personalised financial planning) with additional access to trust services

3

> USD 5 MILLION

Accounts with an AuM of USD 5 million and above have the opportunity to work with a team of investment specialists advising on tax-efficient investing and comprehensive wealth planning strategies

Source: Quinlan & Associates analysis

RESPONSE BY NEW-AGE ROBO-ADVISORS

Native robo-advisors have tried to respond to these setbacks by implementing a hybrid service model / product offering, or partnering with traditional peers

Responses to Challenges
Robo-Advisors

CHALLENGE	RESPONSE	EXAMPLE
Superficial Client Relationship Lack of an emotional connection and a trust deficit with clients, due to algorithmic aversion and low personalisation	**Hybrid Customer Interaction** Provide customers with access to financial guidance or planning through phone or video calls with human financial advisors	**Betterment Premium** • Betterment launched Betterment Premium, providing unlimited access to certified financial planners, for a higher balance and fee level
Lack of Active Investments Focus on passive investments (e.g. index-tracking products), due to insufficient capabilities to support active strategies	**Hybrid Product Offerings** Add additional input from human research analysts on specific individual stocks, geopolitics, etc., to enrich product offerings	**Personal Capital Wealth Mgmt. Plans** • Personal Capital Wealth Management Plans provide access to individual stocks, bonds, private equity, and ETFs
Comeback from Legacy Peers Traditional competitors have entered the robo-advisory fray as well and are disrupting the disruptors	**Partnership with Traditional Players** Establish partnerships with traditional peers that do not have a robo-advisor to leverage their brand name and existing client base	**AQUMON & CMB Wing Lung Bank** • AQUMON helped develop and launch a robo-advisor for CMB Wing Lung Bank, acting as a B2B WealthTech provider

ECONOMIC FEASIBILITY CONCERNS (1/3) – HIGH COSTS (1/2)

However, the economic viability of the business model remains under scanner, due to high customer acquisition and maintenance costs

Customer Acquisition Cost ("CAC")
USD per User

1,000

800

600

400

200

0

1,000

470

220

Max
Average
Min

Ongoing Maintenance Costs
USD per User per Annum, 2020 – 2026F

Growth:
31.4%

35

30

25

20

15

10

5

0

2020	2021	2022F	2023F	2024F	2025F	2026F
24.5	**25.4**	**26.7**	**28.3**	**29.8**	**31.1**	**32.2**
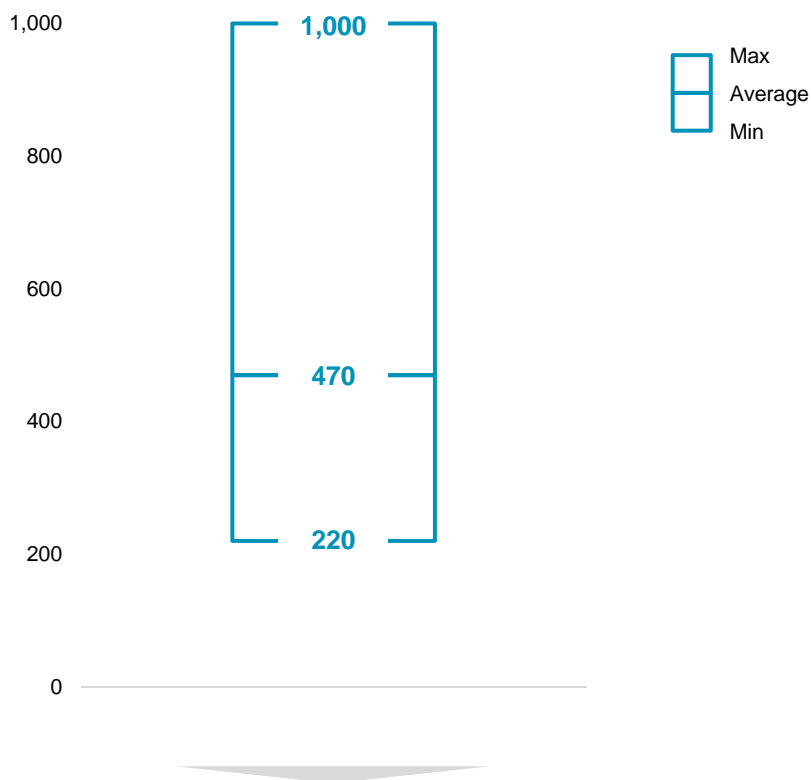
The median robo-advisory customer is being acquired for an eye-watering sum of USD 470
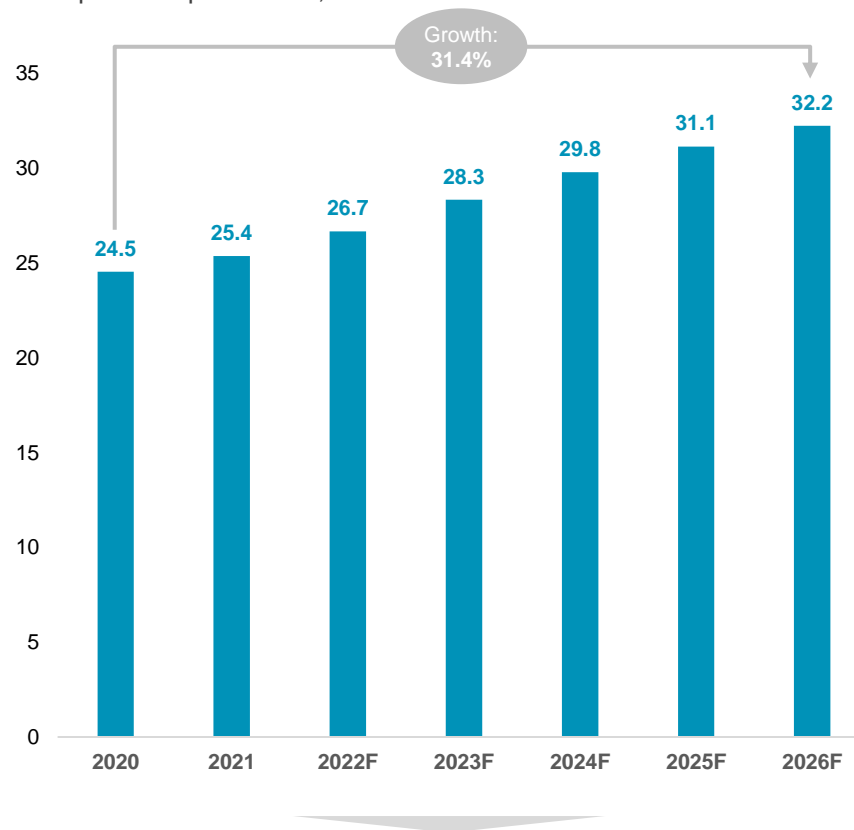
Robo-advisors have an average per annum maintenance cost margin of 0.52% of a client's AuM

ECONOMIC FEASIBILITY CONCERNS (1/3) – HIGH COSTS (2/2)

In order to lower operating costs, robo-advisors need to capture economies of scale through more robust asset gathering

Profitability Equation (Cost-Based)

Operating Expense (y-axis) vs. AuM (x-axis)

By leveraging economies of scale, operating expense drops significantly as AuM increases

Robo-advisors need to maintain an operating expense below 25 bps to sustain a healthy profit margin

OPERATING EXPENSE (%)

ASSET UNDER MANAGEMENT (USD BILLION)
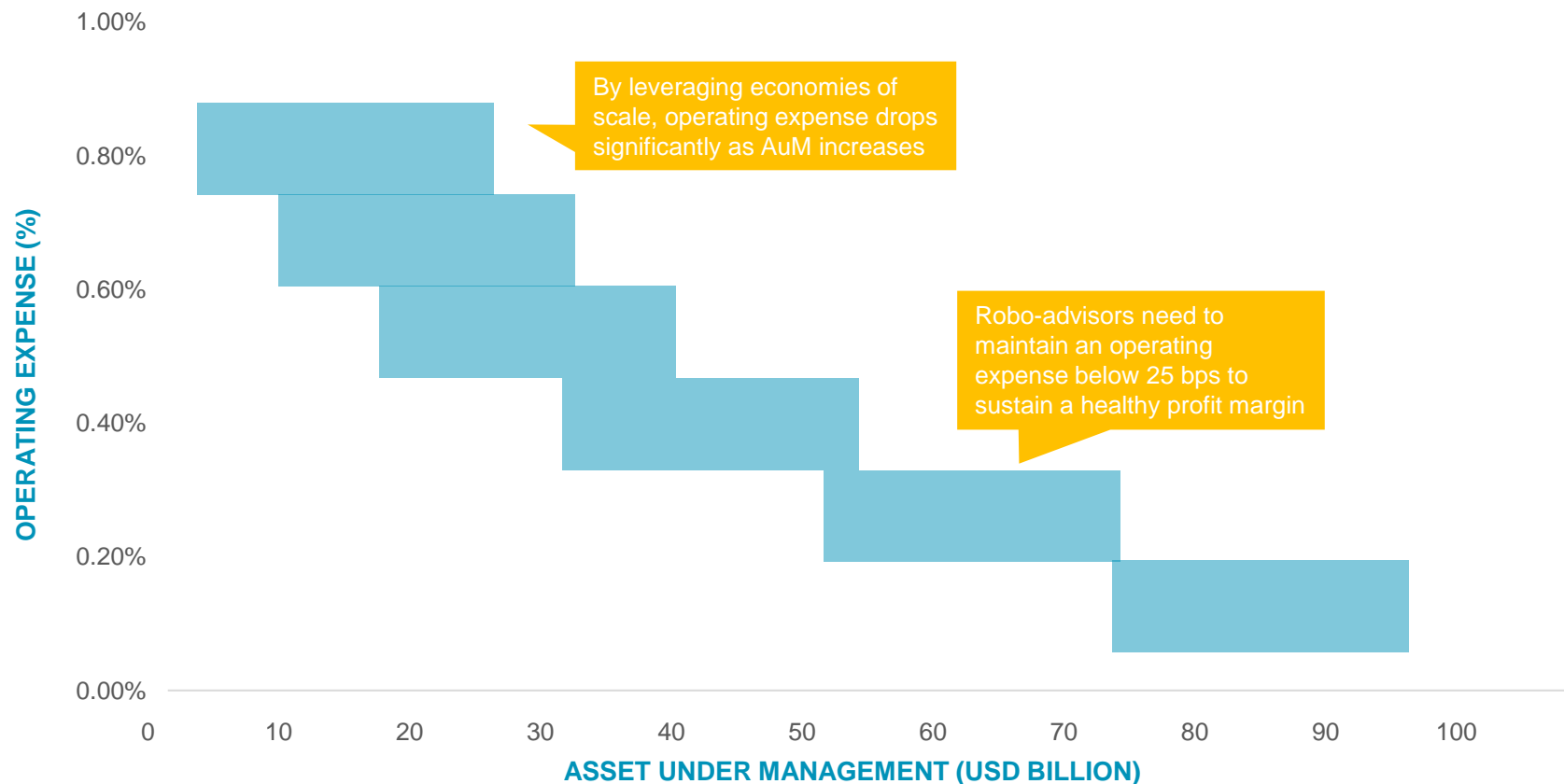
*includes the digital offerings of notable players like Charles Schwab, TD Ameritrade, and E*Trade

Source: Morningstar, Quinlan & Associates analysis

ECONOMIC FEASIBILITY CONCERNS (2/3) – LOW REVENUES

In addition to high CACs, most robo-advisors are generating revenue yields <1%, while AuM growth has also slowed sharply, decreasing their monetisable base

Revenue Yield
% Fees Charged Annually

Max
Min

2.0%
1.0%

Traditional Players

Due to a much lower fee level, the revenue yield for robo-advisors is relatively small

0.7%
0.2%
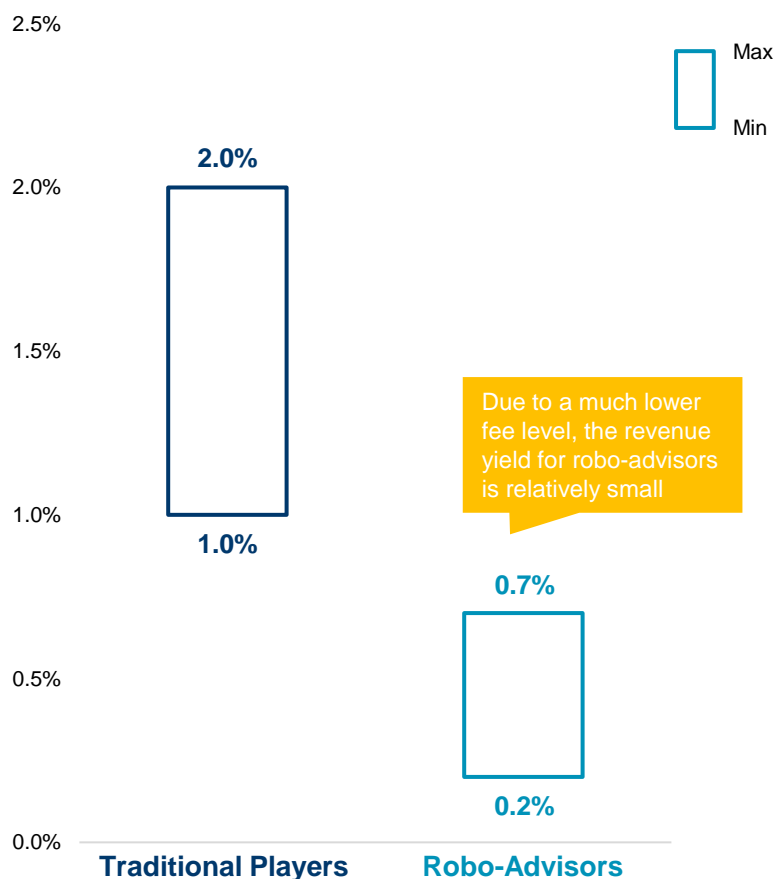
Robo-Advisors

AuM Growth Rate
%, 2018 – 2026F

75.1%
57.7%
28.8%
34.6%
25.0%
20.1%
16.7%
13.5%
10.5%

While the decline in AuM growth rate may have taken a pause in 2021, due to the pandemic, it is set to resume

2018   2019   2020   2021   2022F   2023F   2024F   2025F   2026F

Source: Statista, Burnmark, ETF Strategy, Wipro, Quinlan & Associates analysis
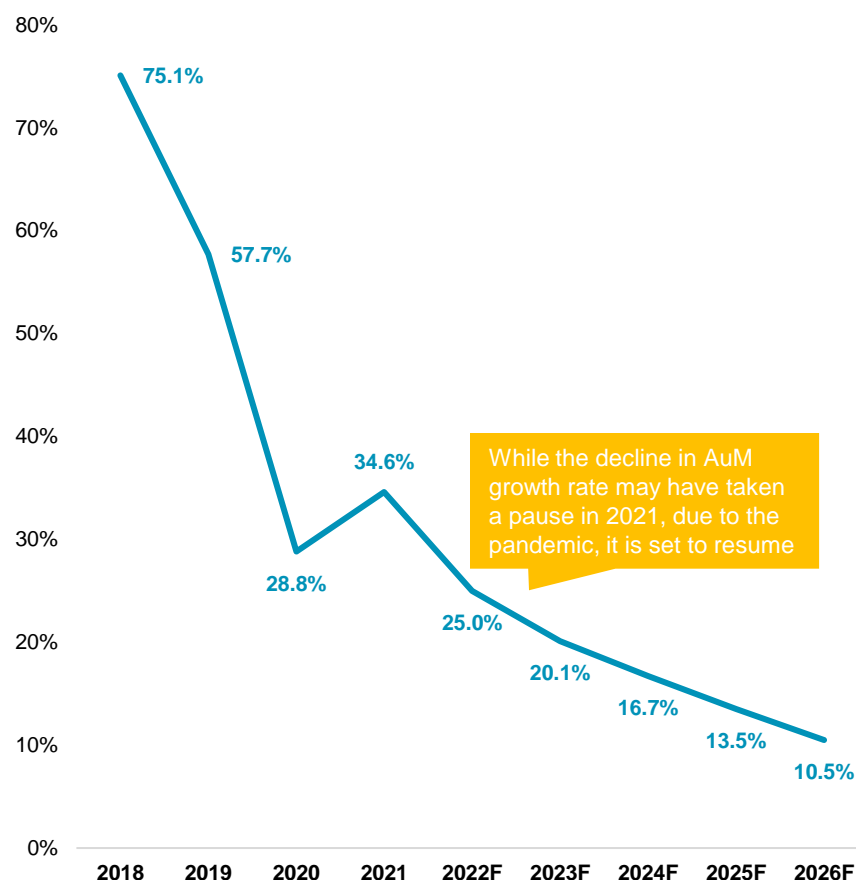
ECONOMIC FEASIBILITY CONCERNS (3/3) – LACK OF PROFITABILITY

Taking more than a decade to recoup their marketing expenses in order to become profitable, robo-advisors may need to reach USD 15 billion in AuM to remain viable

Marketing Expense Payback Period
# of Years

10+ Years

4-5 Years

Traditional Players   **Robo-Advisors**
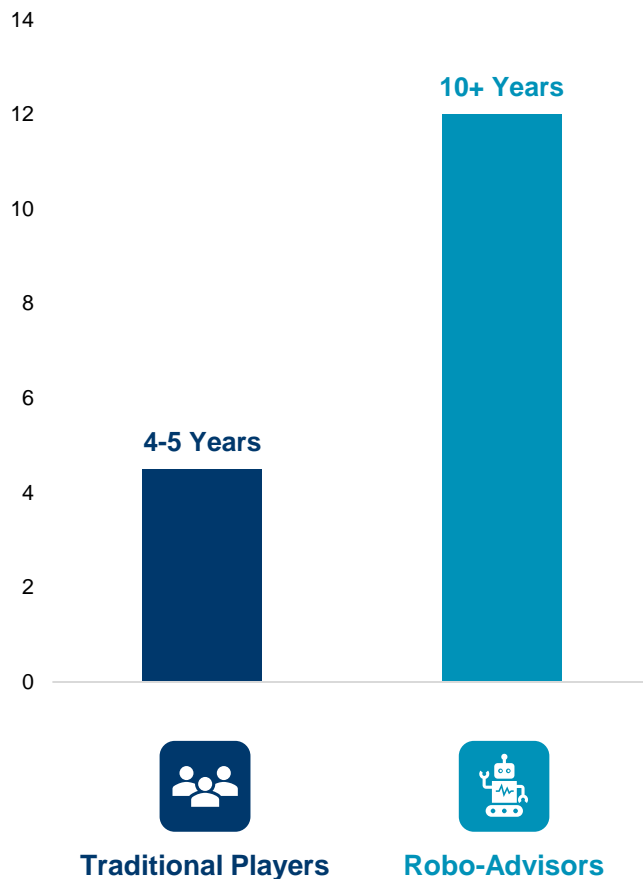
Profitability Equation (Revenue-Based)
AuM (y-axis) vs. Revenue Yield (x-axis)

The lower a robo-advisors' revenue yield is, the higher the amount of assets that they need to amass

Under-water

To become profitable at a lower AuM threshold, robo-advisors need to be able to sustain a higher revenue yield

AuM (USD Billion)

Revenue Yield (bps)

Odds of Profitability: Negligible   Low   Moderate   High
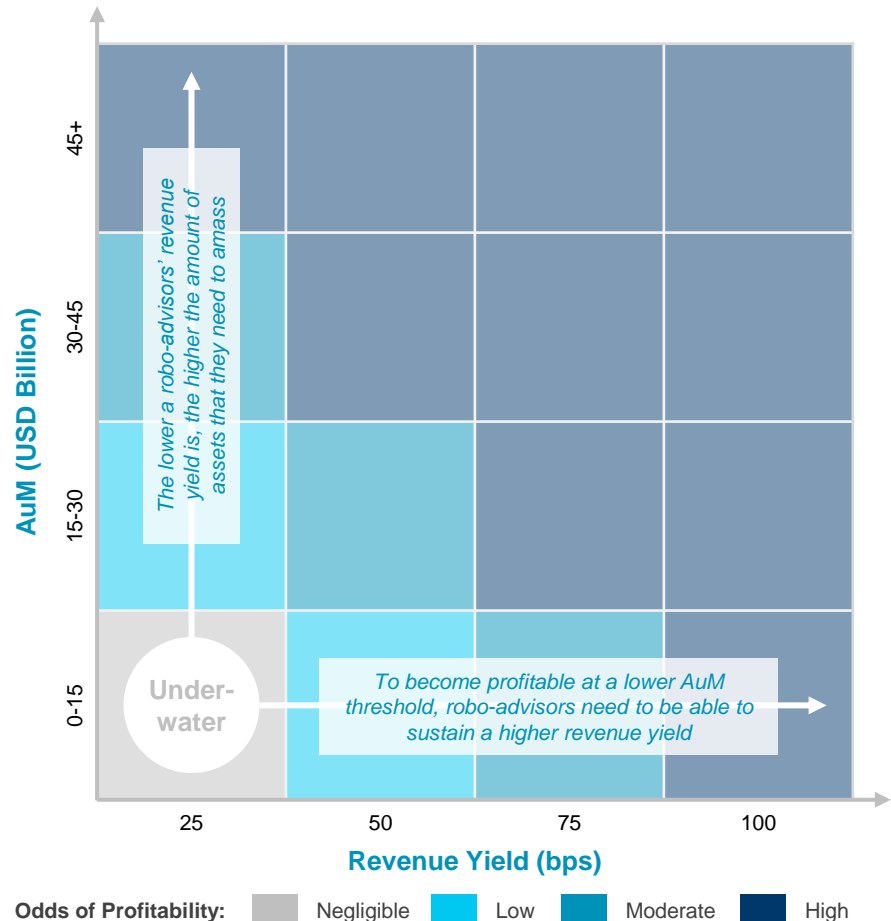
INDUSTRY CONSOLIDATION (1/2) – AUM DISTRIBUTION

With an overwhelming majority of robo-advisors' AuM a far cry from the levels required to break-even, it is no wonder that so many are losing money

Robo-Advisor Asset Level
% of Robo-Advisors by AuM

95% — < 1

3% — 1-15

1% — 15-25

1% — >25

Robo-advisors should have a minimum AuM of at least USD 15 billion in order to have a shot at breaking-even

AUM SIZE (USD BILLIONS)

Source: Morningstar, ThinkAdvisor, Quinlan & Associates analysis
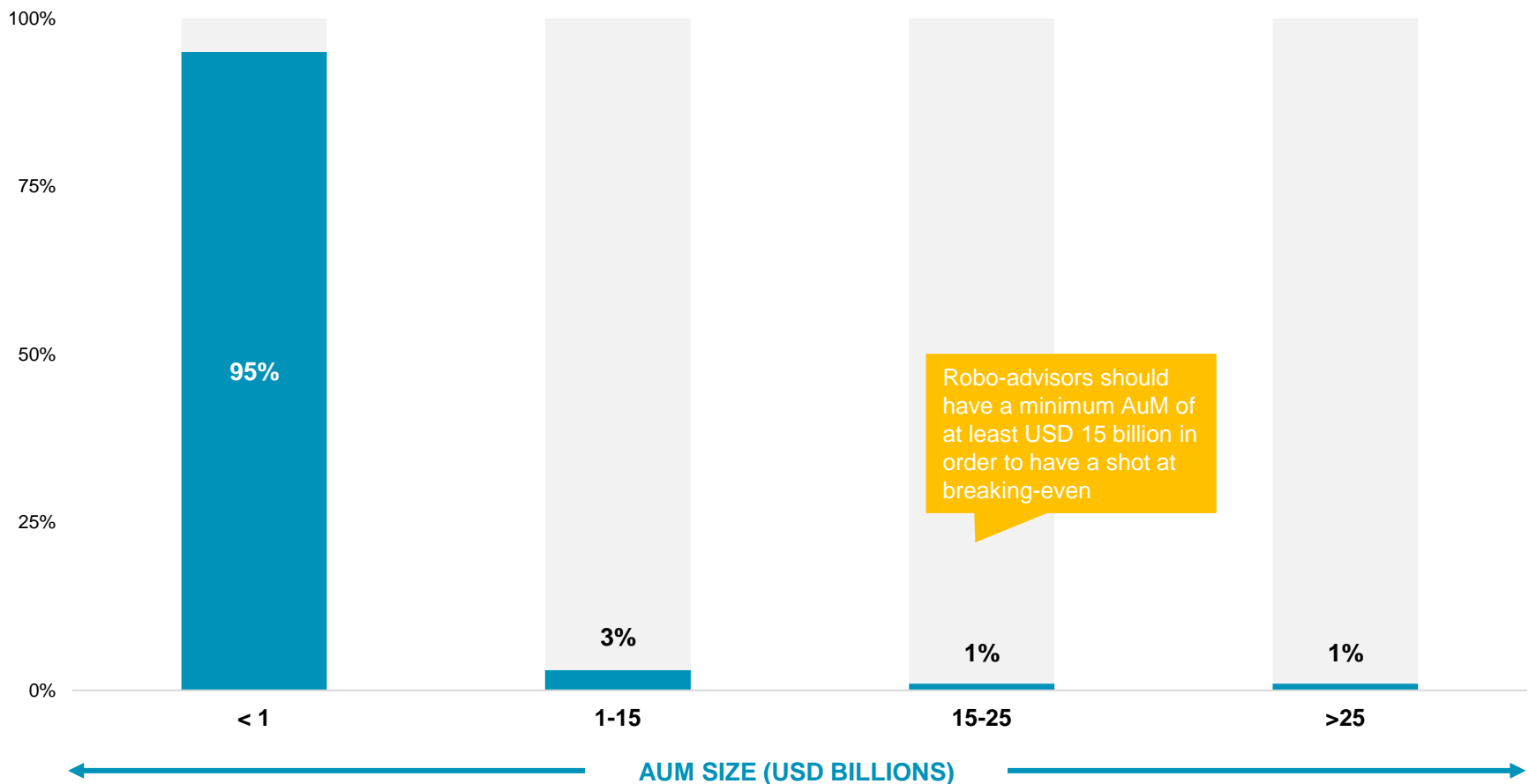
INDUSTRY CONSOLIDATION (2/2) – CLOSURES & ACQUISITIONS

Consequently, we are witnessing a wave of industry consolidation, resulting in either the shuttering of standalone players or their acquisition by legacy incumbents

Industry Consolidation
Robo-Advisors

2015   **2016**   **Aug**   **Jan**   **May**   **2017**   **Sep**

Oct   **Jul**   **2019**   **Aug**   **May**   **2018**

2020   **May**   **Jun**   **2021**   **Jun**   **2022**   **Jan**
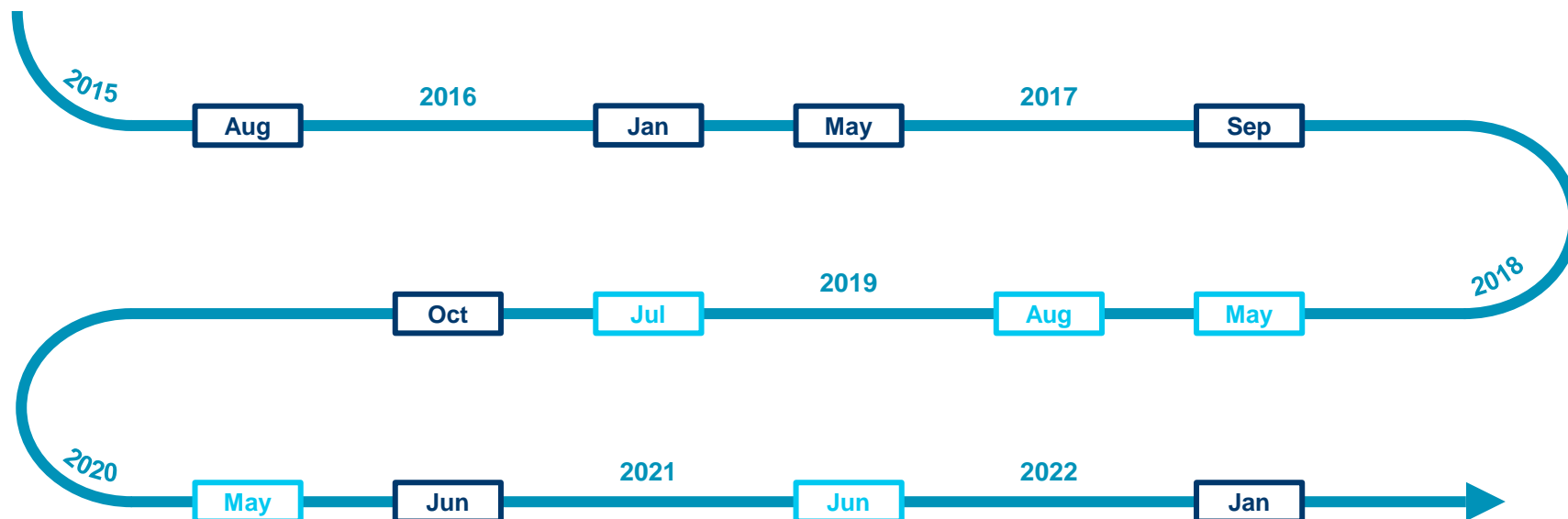
Date	Closure of Robo-Advisors
May 2018	Learnvest
Aug 2018	Hedgeable
Jul 2019	Swell
May 2020	Motif
Jun 2021	RobustWealth

Date	Acquisition of Robo-Advisors
Aug 2015	FutureAdvisor by BlackRock
Jan 2016	Jemstep by Invesco
May 2016	Honest Dollar by Goldman Sachs
Sep 2017	Gambit acquired by BNP Paribas
Oct 2019	WiseBanyan by Axos Financial

Date	Acquisition of Robo-Advisors
Jun 2020	Wealthify by Aviva
Jan 2022	Wealthfront by UBS

☐ Closure
☐ Acquisition

Source: Quinlan & Associates analysis

SECTION 3

MUSTERING
A RESURGENCE

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SECTION 3.1

OPTIMISATION

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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OPTIMISATION OVERVIEW

Given that many robo-advisors face notable drawbacks in acquiring customers, gathering assets, and monetising them, there is considerable scope to optimise their offerings

Overview
Value Chain

	CHALLENGE	SOLUTION
CUSTOMER ACQUISITION	Given their primary focus on low-to-mid income segments, robo-advisors need to rapidly scale-up their user count, which can be quite expensive and competitive	• Rapidly acquire customers to achieve critical mass while keeping CAC in check to guard against a deterioration in underlying unit economics
ASSET GATHERING	The amount of per capita assets that robo-advisors receive from their existing customers is too low, making it hard for them to effectively monetise their captive customer base	• Incentivise customers to allocate a greater proportion of their capital to invest and/or target wealthier customer segments
REVENUE GENERATION	With extremely low revenue yields, it is difficult for robo-advisors to generate a satisfactory average revenue per user ("ARPU") to achieve profitability	• Facilitate a sustainable and profitable robo-advisory model by diversifying revenue streams and/or enhancing existing streams of revenue

Source: Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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CUSTOMER ACQUISITION (1/2) – DESCRIPTION

Robo-advisors can scale-up their customer count by deploying freemium offerings, establishing targeted partnerships, and via acquisitions

Boost Customer Acquisition
Potential Options

FREEMIUM TOOLS

Offer a variety of free tools in an attempt to capture prospective customers first, and then convert them into paying users

REFERRAL PARTNERSHIPS

Establish well-targeted partnerships (e.g. retail banks, brokerages) to gain access to their wide customer base

INORGANIC ACQUISITIONS

Acquire a competing robo-advisor in to drive market share / grow customer count and capture economies of scale

Source: Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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CUSTOMER ACQUISITION (2/2) – CASE STUDY
With a broad suite of money management and long-term financial planning tools, Personal Capital is well-regarded for its extensive freemium offerings

Case Study
Personal Capital

personal CAPITAL
AN EMPOWER COMPANY

Founded in 2009, Personal Capital is an online financial advisor and personal wealth management company headquartered in Redwood Shores, California.

USD 22.4bn
AuM (as of 31st May 2022)

Freemium Tools
Types

MONEY MANAGEMENT
Help users oversee their capital usage via expense tracking, budgeting, etc.

LONG-TERM FINANCIAL PLANNING
Create a balanced plan to help investors achieve their personal goals and ambitions

Freemium Tools
Collection of Free Offerings

1 NET WORTH
Help users gain an accurate view of their total net worth on a real-time basis

2 SAVINGS PLANNER
Showcase an annual savings range that will project a 70% chance of reaching retirement goals

3 BUDGETING
Enable users to organise their spending and savings automatically by date, category, and merchant

4 CASH FLOW
Offer cash flow insights to help users achieve their spending and savings goals

5 RETIREMENT PLANNING
Determine whether an individual is on track to retire by their target date based on their current retirement savings

6 EDUCATION PLANNER
Allow users to estimate and plan how much they should be saving in order to cover future education costs

7 INVESTMENT CHECK
Enable users to track their portfolio and benchmark their investment allocation to the ideal allocation

8 FEE ANALYSER
Provide insights into the performance and expense ratios of thousands of the most popular mutual funds

*Total Personal Capital Advisors Individual Clients
Source: Personal Capital, Forbes, Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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ASSET GATHERING (1/2) – DESCRIPTION

Simply acquiring users is not enough; AuM growth is crucial, and can be achieved by either moving up the wealth curve and/or adopting a tiered system for existing clients

Target Market
Description

Target Wealthier Segments →

	TIER 1 Mass Retail	TIER 2 Core Affluent	TIER 3 High Net Worth
AuM Range	USD 1,000 – 500,000	USD 500,000 – 5,000,000	USD 5,000,000 – 20,000,000+
Product Complexity	Basic (e.g. index funds)	Intermediate (e.g. active funds)	Sophisticated / Fully Bespoke
Portfolio Construction	Mass Customisation	Mass Customisation	Personalised
Ancillary Services	Limited (e.g. goal tracking)	Moderate (e.g. consultation call)	Extensive (e.g. financial planning)
Engagement Focus			
Robo-driven	✓	✓	-
Human-driven	✗	-	✓

✓ Strong   - Moderate   ✗ Weak

Tiered Offering
Examples

Types of Offerings	Examples
Financial Guidance	• Tier 1: financial advisory team • Tier 2 & 3: dedicated financial advisors
Advisory Services	• Tier 1 & 2: investment review • Tier 3: wealth planning (estate, tax, and legacy)
Investment Services	• Tier 1 & 2: portfolio rebalancing • Tier 3: estate, tax, and legacy portfolio construction
Portfolio Composition	• Tier 1: Exchange-traded funds • Tier 2: Individual stocks • Tier 3: Private equities

Source: Personal Capital, Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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ASSET GATHERING (2/2) – CASE STUDY
Singapore-based Syfe, for example, launched a tiered offering based on AuM, to incentivise customers to deposit greater amounts for enriched offerings

Case Study
Syfe

Syfe

Founded in 2018, Syfe is a Singapore-based digital wealth management company which provides robo-advisory services on a variety of investment portfolios covering equities, bonds, ETFs, and REITs.

UNDISCLOSED
AuM

Tiered Offering
Annual Management Fee by Tier

1 BLUE TIER 0.65%

2 BLACK TIER 0.50%

3 GOLD TIER 0.40%

4 PRIVATE WEALTH 0.35%

Tiered Offering
Fees & Features

	BLUE TIER	BLACK TIER	GOLD TIER	PRIVATE WEALTH
Annual Mgmt. Fee	0.65%	0.50%	0.40%	0.35%
Minimum Invested Amount*	SGD 0	SGD 20,000	SGD 100,000	SGD 500,000
Customisable Portfolio	✓	✓	✓	✓
Weekly Q&A Session	✓	✓	✓	✓
Consultation Call	✗	✓	✓	✓
In-depth Financial Planning	✗	✗	✗	✓
Non-retail Investments**	✗	✗	✗	✓

✓ Applicable - Dependent ✗ Inapplicable

*Or Current Value of All Investment Portfolios, **Institutional and Accredited Investor Offerings
Source: Syfe, Quinlan & Associates analysis

| CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING |

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CUSTOMER ACQUISITION & ASSET GATHERING (1/2) – DESCRIPTION

In order to both attract investors and their wallet share, robo-advisors should develop an appropriate mix of theme-based, goal-based, and risk-based investment capabilities

Investment Portfolio
Description
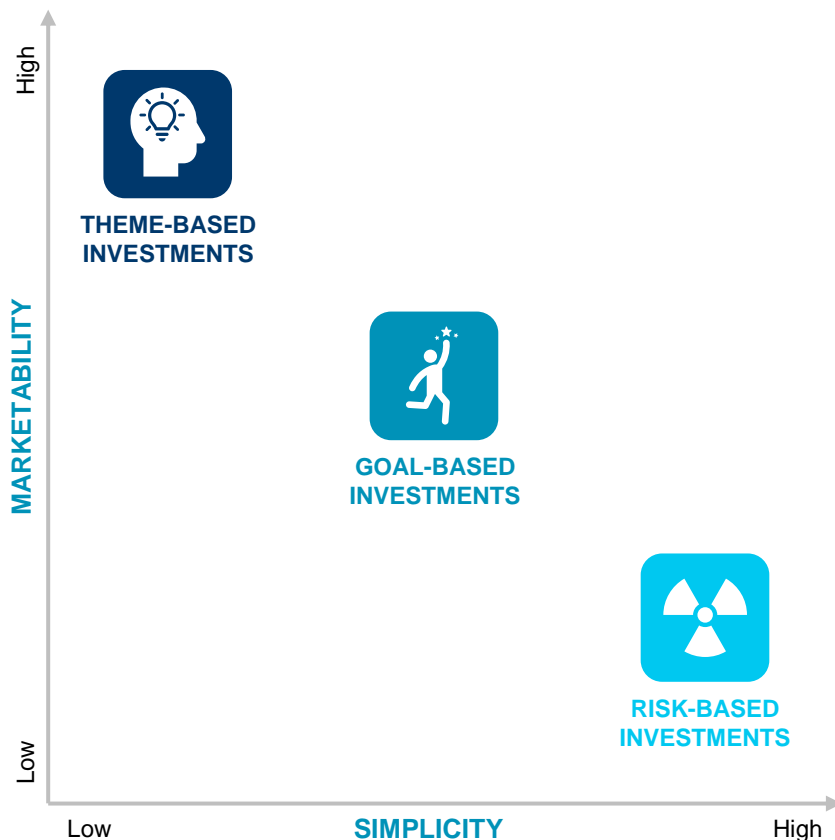
THEME-BASED INVESTMENTS

An investment strategy that focuses on predicted long-term trends, e.g. ESG[1], and identifying investments that stand to benefit

GOAL-BASED INVESTMENT

An investment strategy that generates the highest possible probability of achieving an investor's financial goals

RISK-BASED INVESTMENT

An investment strategy that aims to generate the highest return, based on an investor's risk appetite

[1]Environmental, Social, and Governance
Source: Quinlan & Associates analysis

QUINLAN &ASSOCIATES

CUSTOMER ACQUISITION & ASSET GATHERING (2/2) – CASE STUDY

Stashaway, for example, has launched theme-based investment portfolios, covering technology enablers, ConsumerTech, healthcare, as well as environment and CleanTech

Case Study
Stashaway

StashAway

Founded in 2016, Singapore-based StashAway is a robo-advisor that services 100,000 users from 145 countries. Recently, the company launched Thematic Portfolios with four key themes.

USD 1.0bn
AuM (as of 23rd March 2021)

Thematic Portfolios
Featured ETFs

ARK INVEST

GLOBAL X by Mirae Asset

iShares by BlackRock

VanEck®

Thematic Portfolios
Themes

Technology Enablers
Invest in core technology enablers, such as Artificial Intelligence ("A.I.") and blockchain

The Future of ConsumerTech
Cover a variety of consumer technology, with exposure to eCommerce, FinTech, gaming, etc.
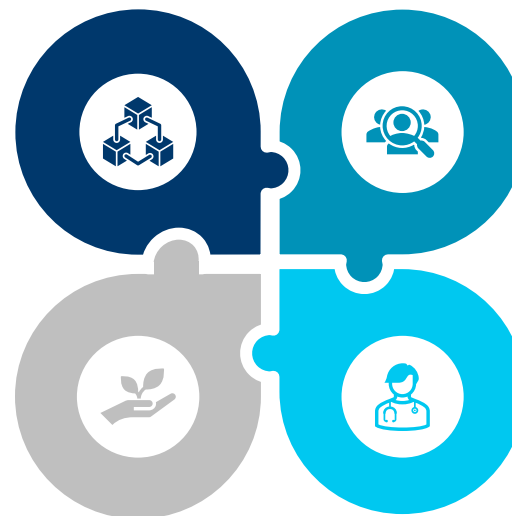
Environment and CleanTech
Gain exposure to sustainable solutions and low-carbon technology players

Healthcare Innovation
Support healthcare innovation by exploring BioTech, genomics, medical devices, and pharmas[1]

[1]Pharmaceuticals
Source: Stashaway, Fund Selector Asia, The Asian Banker, Quinlan & Associates analysis

VERTICAL STREAMLINING   HORIZONTAL EXPANSION

CUSTOMER   ASSET   REVENUE   B2B   DIGITAL   SELF-DIRECTED   DIGITAL
ACQUISITION   GATHERING   GENERATION   OFFERINGS   ENABLEMENT   SERVICES   BANKING

REVENUE GENERATION (1/2) – DESCRIPTION

Capturing a sizeable customer and AuM base may not be enough; robo-advisors still need to generate a sufficient revenue yield by tapping into various revenue streams

Diversify Revenue Streams
Potential Models

DEPOSIT & WITHDRAWAL

Charge investors a deposit and/or withdrawal fee when they move their funds in / out

FX CONVERSION

Levy foreign exchange ("FX") conversion fees during foreign currency denominated investments

CREDIT EXTENSION

Offer a collateralised loan against select investments at a reasonable interest rate

PRIVATE LABELLING

Create proprietary mutual funds / index funds / ETFs and charge an expense ratio
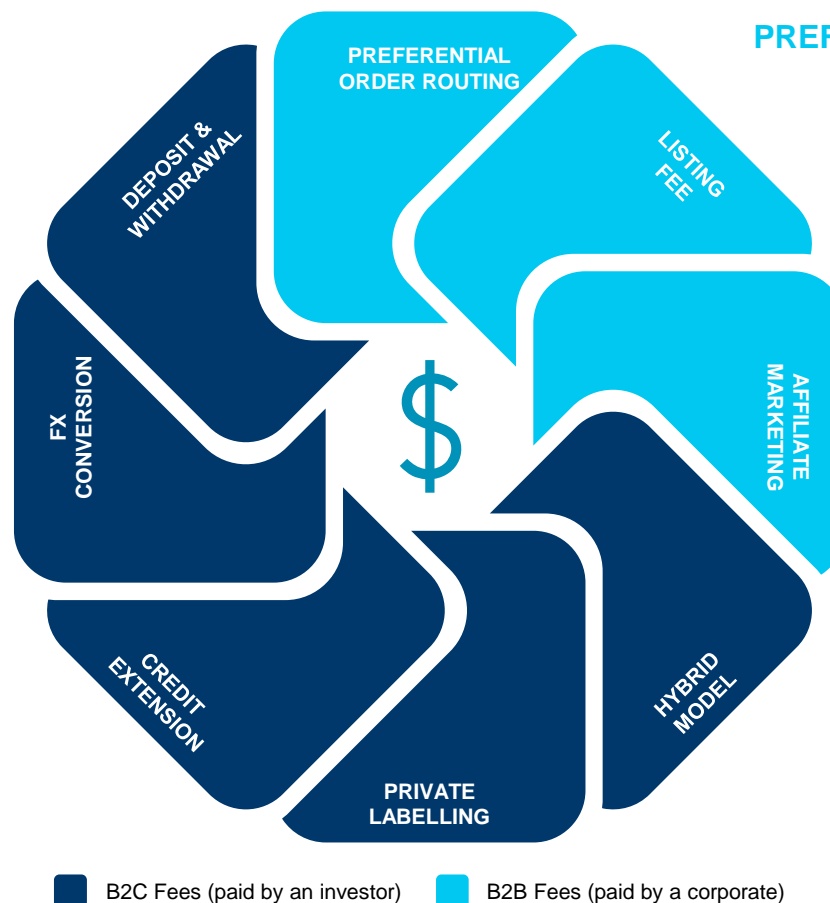
PREFERENTIAL ORDER ROUTING

Select which market centres the orders are routed to, based on who pays higher for the order flow

LISTING FEE

Charge a listing fee from funds that receive robo-advisory capital inflows

AFFILIATE MARKETING

Act as a marketing outlet to push funds of asset managers that pay an affiliate marketing fee

HYBRID MODEL

Allow access to human advisory on top of robo-advisory services for an additional fee

- ■ B2C Fees (paid by an investor)
- ■ B2B Fees (paid by a corporate)

Source: Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | **REVENUE GENERATION** | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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&ASSOCIATES

REVENUE GENERATION (2/2) – CASE STUDY

Charles Schwab has been able to monetise its robo-advisory offering quite effectively by carving out multiple revenue streams
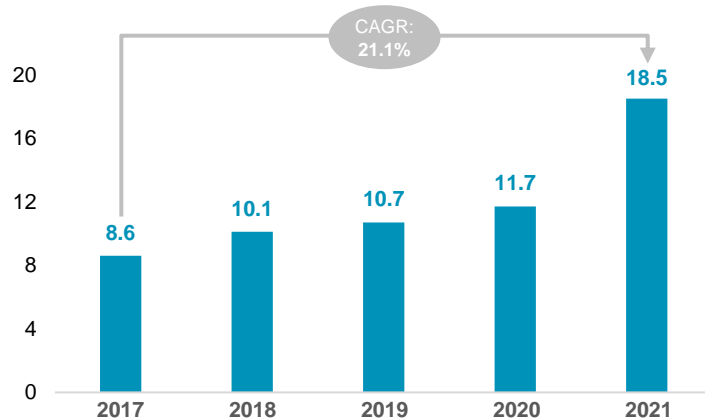
Case Study
Charles Schwab

Established in 1971, Charles Schwab started as a traditional brokerage. In 2015, the brokerage firm launched its first robo-advisory service, Schwab Intelligent Portfolios.

USD 76bn
AuM, Q1 2022

Charles Schwab Net Revenue
USD Billion, 2017-2021

CAGR: 21.1%

Year	Value
2017	8.6
2018	10.1
2019	10.7
2020	11.7
2021	18.5

Monetisation
Description

ONE-TO-ONE GUIDANCE FEE
Offer unlimited one-to-one guidance at a one-off planning fee of USD 300, and a monthly subscription fee of USD 30 every month

PREFERENTIAL ORDER ROUTING
Receive remuneration, such as liquidity or order flow rebates, from market venues to which orders are routed

PRIVATE LABELLING
Select which market centres the orders are routed to, based on who pays higher for the order flow

FUND ESTABLISHMENT
Charge an establishment fee when a new fund is added to Schwab's platform

AFFILIATE MARKETING
Engage in affiliate marketing with mutual fund sponsors (e.g. T.Rowe Price) at a performance-based rate

FOREIGN CURRENCY TRANSACTION
Foreign currency transactions are subject to a fee of up to 1% of principal, based on the amount of currency converted in a single transaction

CAPITAL FOR LENDING
Leftover cash gets invested in deposits at affiliate bank – Charles Schwab Bank, which can be lent out for additional revenue
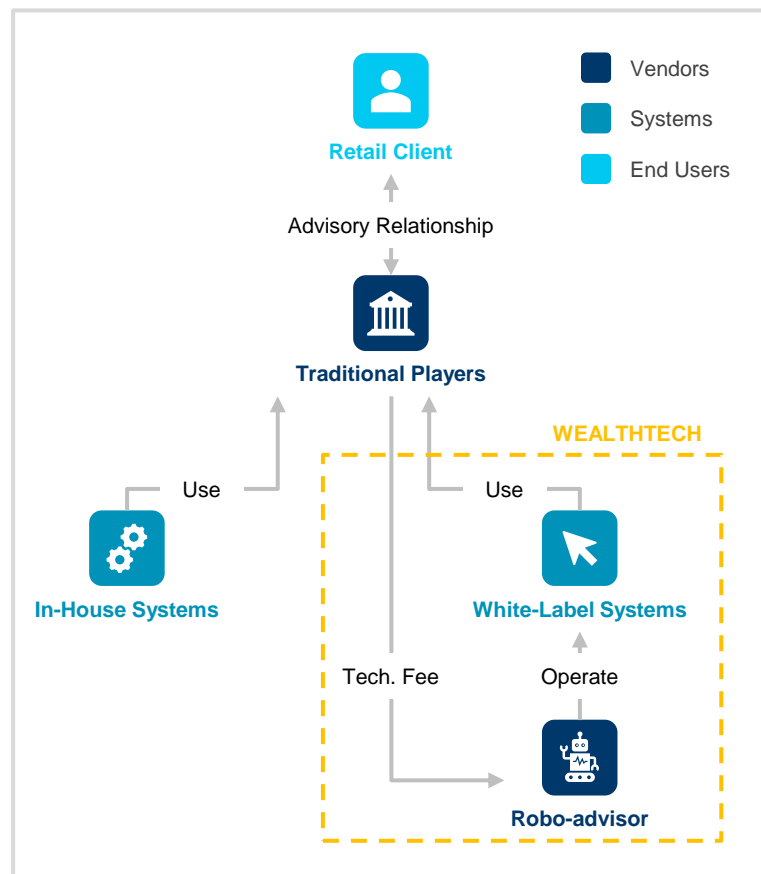
Source: Charles Schwab, Business Insider, Forbes, Quinlan & Associates analysis

SECTION 3.2

EXPANSION

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VERTICAL STREAMLINING   HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

B2B WEALTHTECH OFFERINGS (1/2) – DESCRIPTION

With regards to horizontal expansion, robo-advisors can look to provide B2B WealthTech solutions to traditional players, enhancing their wealth management proposition

WealthTech Solution
B2B Model

Vendors
Systems
End Users

Retail Client

↑ Advisory Relationship ↓

Traditional Players

WEALTHTECH

Use → In-House Systems

Use → White-Label Systems

Tech. Fee   Operate

Robo-advisor

Value Chain
Modular Offerings

Customer Acquisition — By facilitating a dashboard and customer analytics tools, relevant leads can be readily identified and converted into new customers

Needs Modelling — Various sets of data can be collected and analysed to create a holistic customer profile, which includes investment targets and risk sentiment

Investment Solutions — Enable sourcing and combining of various products, both proprietary and third-party, to create a best-suited portfolio for the investor

Portfolio Management — Execute trades in the investors' best interest to comply with regulations, while also enabling automated reporting of portfolio performance

Customer Maintenance — Drive push and pull customer engagement by incorporating investment research and other content, and often by integrating a CRM system

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B2B WEALTHTECH OFFERINGS (2/2) – CASE STUDY

Kristal.AI has ventured into the B2B segment, offering advisory-led solutions to open up an additional source of revenue, expand its market share, and realise its growth potential
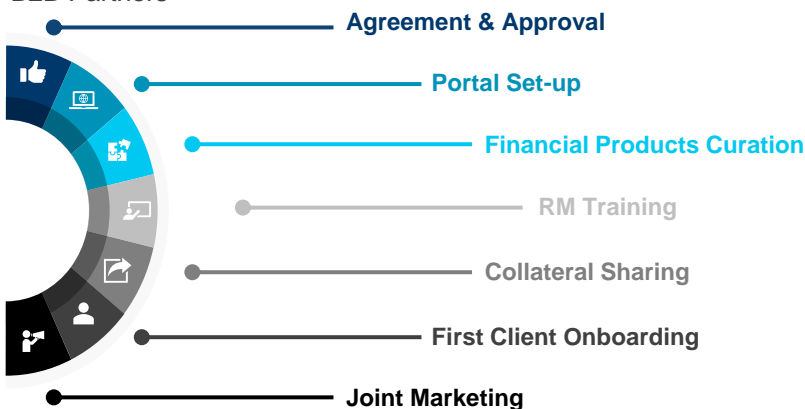
Case Study
Kristal.AI

KRISTAL

Established in 2016, Kristal.AI is an AI-powered virtual wealth manager targeting the affluent segment who are underserved by private banks, while also offering hybrid-advisory solutions to traditional wealth managers.

USD 400 Million
AuM

Onboarding Process
B2B Partners

- Agreement & Approval
- Portal Set-up
- Financial Products Curation
- RM Training
- Collateral Sharing
- First Client Onboarding
- Joint Marketing

B2B Proposition
Kristal.AI

One-stop Solution
Offers an end-to-end process and consolidated view on a single platform

Customised Model Portfolios
Provides exclusive access to products and strategies tailored to clients' profile

Powered by AI
Using AI-driven insights, the quality of advisory solutions are enhanced

Knowledge Sharing
Facilitates exclusive and personalised market insights and webinars

Benefits of B2B Offerings

1	**Alternative Revenue Source**	• Earns fees from partners (e.g. banks, insurers) who are actively leveraging its solutions
2	**Greater User Penetration**	• Kristal.AI's institutional client base reaches more affluent investors, beyond its end customer base
3	**Scalability Potential**	• A B2B solution offers considerable downstream growth potential for AuM and customer count

Source: Kristal.AI, Mint, Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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DIGITAL ENABLEMENT (1/2) – DESCRIPTION

Given their existing digital capabilities, robo-advisors may also offer solutions to digitally enable traditional human advisors, empowering them to become cyborg-advisors
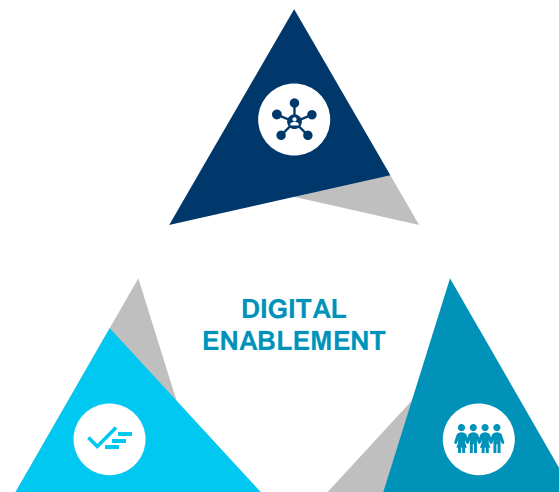
Digital Enablement
Model
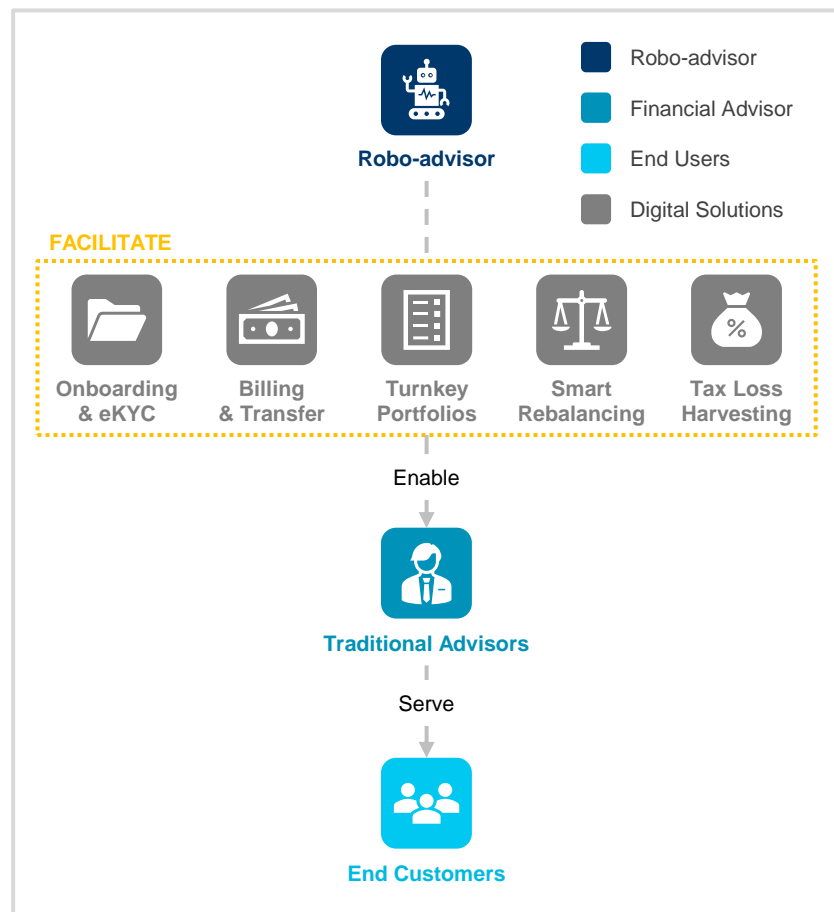
Value Proposition
Digital Enablement

Focus on Higher Value Advice
Advisors can direct more of their focus towards offering quality advice and driving ROIA, given the outsourced investment insights and curated portfolios

DIGITAL ENABLEMENT

Operational Efficiency
By automating most of their back-end operations, advisors could serve more clients, leading to a higher client-to-advisor ratio

Better Serve the Next Gen
With a digital, user-friendly solution, advisors could better prepare for a transfer of their clients' wealth, attracting the next generation

Source: Betterment, Quinlan & Associates analysis

VERTICAL STREAMLINING   HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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DIGITAL ENABLEMENT (2/2) – CASE STUDY

Betterment for Advisors evolved from its expertise as a robo-advisor, expanding its capacity to serve financial advisors and create an additional source of recurring revenue

Case Study
Betterment

Betterment

Established in 2008, Betterment is a leading robo-advisor with over USD 33 billion in AuM, while also offering solutions known as 'Betterment for Advisors' to empower 2,000 financial advisors around the world.

USD 33bn
AuM (as of 31st March 2022)

Betterment for Advisors
Customer Count

Wealth Managers — 600

Financial Advisors — 2000

| 0 | 500 | 1000 | 1500 | 2000 |
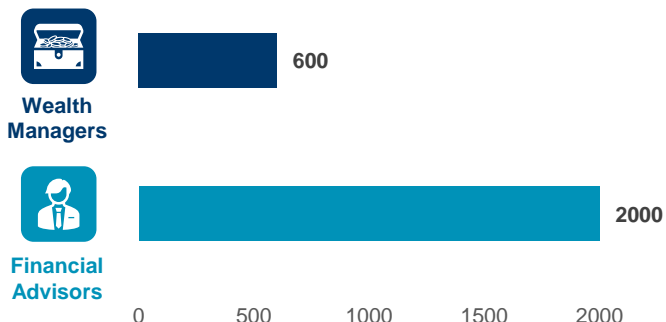
Features
Betterment for Advisors

1	**Seamless Set-up**	*Eliminates the minimum asset commitment, which had been USD 2.5 million / advisor, and eased the migration of client portfolios onto the platform*
2	**Wide Product Range**	*Advisors can choose from over 1,500 ETFs to form a portfolio, some of which are thematic, e.g., technological innovation and ESG, etc.*
3	**Automated Portfolio Construction**	*Advisors can build their own model portfolio without interacting with Betterment's RMs[1], with the ability to also add their own assumptions*
4	**Smart Portfolio Rebalancing**	*Investments are placed in the best accounts for tax purposes while ensuring that the portfolio aligns with stated objectives during rebalancing*
5	**Interactive Investor Experience**	*The advisors' clients can utilise its interactive portal, providing planning tools and offering greater insights into their investing experience*

[1]Relationship Managers
Source: Betterment, AdvisorHub, Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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SELF-DIRECTED SERVICES (1/2) – DESCRIPTION

To capture a more active set of investors and professional traders, robo-advisors can launch a brokerage platform to support self-directed investing / trading
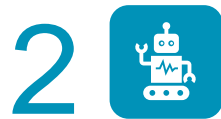
Self-directed Services
Trends

1

Expansion into Brokerage Services by Robo-advisors

AQUMON

Syfe Trade

A growing number of robo-advisors are launching their own brokerages

2

Expansion into Robo-advisory Services by Brokers

SoFi

E*TRADE

QUESTRADE

A number of brokerages have launched their own robo-advisory solutions

Investor Benefits
Self-Directed Services

Greater Control
Investors can choose their own investments, holding stocks from companies and industries they believe in, while keeping dividends

Active Management
With the passive nature of robo-advisory investments being a pain point, a self-directed brokerage platform can enable active mgmt.

Wider Range of Offerings
Investors can invest in a broad range of asset classes and products, while most robo-advisors are constrained to ETFs

Source: Aqumon, Syfe, SoFi, E*Trade, Questrade, Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

QUINLAN &ASSOCIATES

SELF-DIRECTED SERVICES (2/2) – CASE STUDY

AQUMON expanded its B2C offering with a self-directed brokerage service, charging a flat fee for investors interested in trading at their own discretion

Case study
AQUMON

AQUMON

Established in 2016, AQUMON provides digital wealth management services, offering cash management, thematic, and long-term asset allocation portfolios. It also facilitates self-directed trading for retail investors.

100,000
End Users

Self-directed Trading
Features

1 **Free Market Quotes**
Free market data and quotes from the US, Hong Kong, and China are provided on the platform for best execution

2 **Around-the-clock Currency Exchange**
Make trades anytime with AQUMON's 24/7 USD currency exchange service from HKD to USD, and vice versa

3 **Best in-class Support and Onboarding Process**
Facilitates a 5-minutes sign up process and 24/7 customer success team to guide investors through any questions

Business Model
AQUMON

AQUMON
Solution Vendor

Self-Directed Brokerage **1**

Robo-advisor Platform **2**

Advisor-led Solutions **3**

Target Client Segments

Mass Retail | Mass Affluent | RMs | Wealth Managers
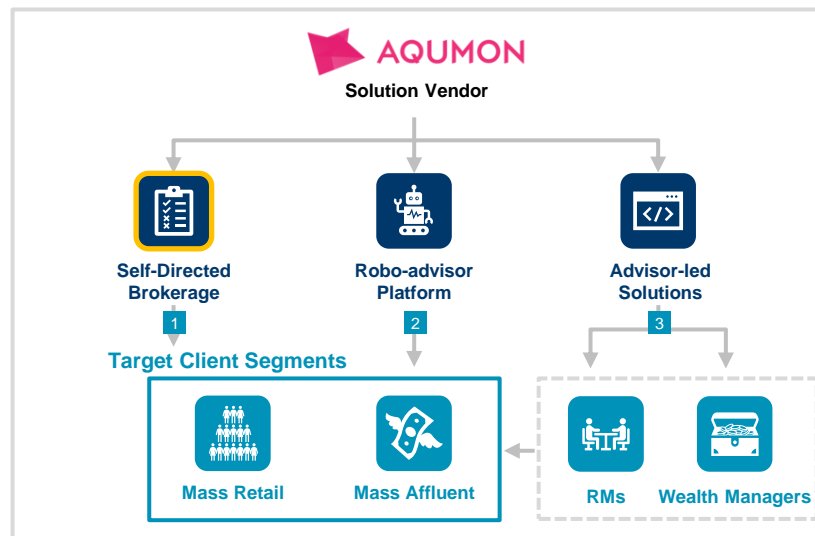
1 **Self-Directed Brokerage**
Aqumon recently launched its services for individuals who would like trade stocks and ETFs at their own discretion, charging a flat fee for each trade

2 **B2C Robo-Advisory Platform**
Aqumon's strategy is to scale its user base, making the end-to-end robo-advisory solutions as standardised as possible without customisation

3 **B2B Advisor-led Solutions**
Aqumon builds advisor-led solutions for RMs and wealth managers, targeting the mass retail and affluent customer segment

■ Products ■ Clients

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

QUINLAN & ASSOCIATES
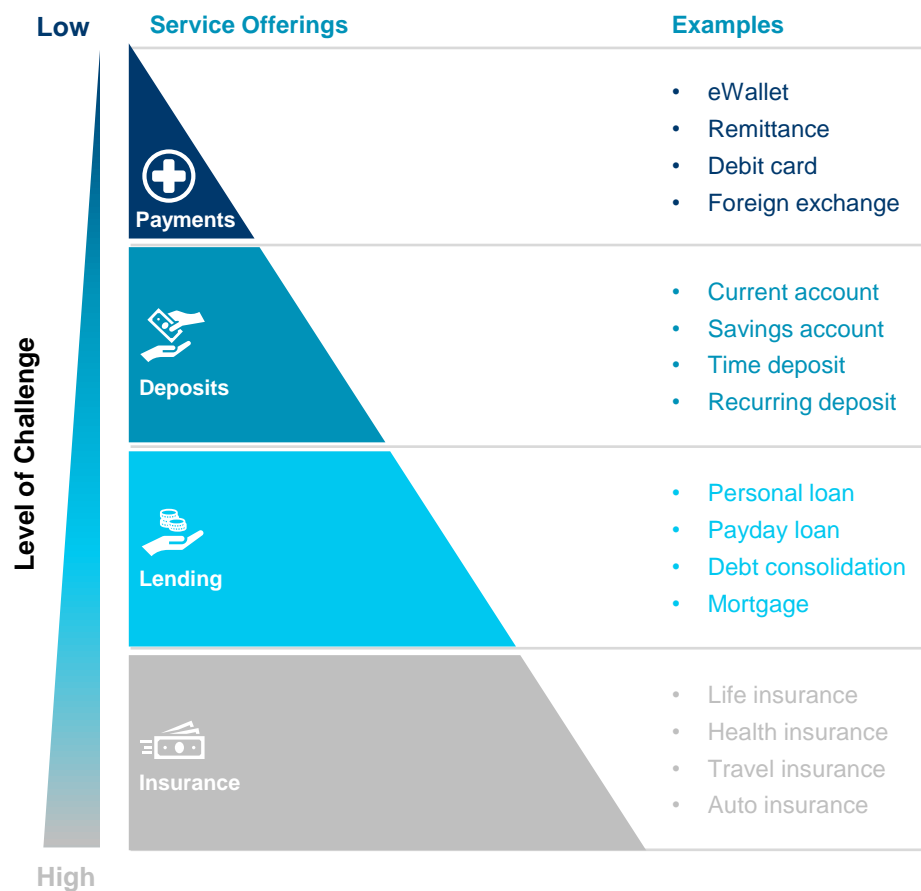
DIGITAL BANKING (1/2) – DESCRIPTION

By offering digital banking services via partners, robo-advisors could create a holistic wealth management ecosystem, enriching their product ecosystem beyond just investing

Digital Banking
Service Offerings

Options
Available Paths

Low

Level of Challenge

Service Offerings	Examples
Payments	• eWallet • Remittance • Debit card • Foreign exchange
Deposits	• Current account • Savings account • Time deposit • Recurring deposit
Lending	• Personal loan • Payday loan • Debt consolidation • Mortgage
Insurance	• Life insurance • Health insurance • Travel insurance • Auto insurance

High

Option	Description
BUY Direct Acquisition	A one-time purchase of a licensed financial service provider for robo-advisors to offer digital banking services by leveraging its capabilities and expertise
BUILD In-House Application	A complete, end-to-end, customised development of digital banking services, which may include hiring an internal team to build-out the functionalities
PARTNER Strategic Partnership	A strategic partnership with a third-party financial service provider to white-label its solution or leverage its modular / end-to-end offerings

☐ Recommended

Source: Quinlan & Associates analysis

VERTICAL STREAMLINING | HORIZONTAL EXPANSION

CUSTOMER ACQUISITION | ASSET GATHERING | REVENUE GENERATION | B2B OFFERINGS | DIGITAL ENABLEMENT | SELF-DIRECTED SERVICES | DIGITAL BANKING

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DIGITAL BANKING (2/2) – CASE STUDY

Through partnerships with retail banks, Wealthfront offers a range of digital banking services beyond its core robo-advisory offering, enhancing its overall service proposition

Case Study
Wealthfront

wealthfront

Established in 2008, Wealthfront is an automated investment service firm based in Palo Alto, California. As of today, the company has exceeded USD 24 billion in assets managed.

USD 23bn
AuM, Q1 2022

Wealthfront
Partner Banks

citibank   CROSSFIRST BANK   eastwest >Your dream Our focus<   greendot bank

HSBC   (Gladstone bank)   STATE STREET   TRISTATE CAPITAL

Digital Banking Services
Wealthfront
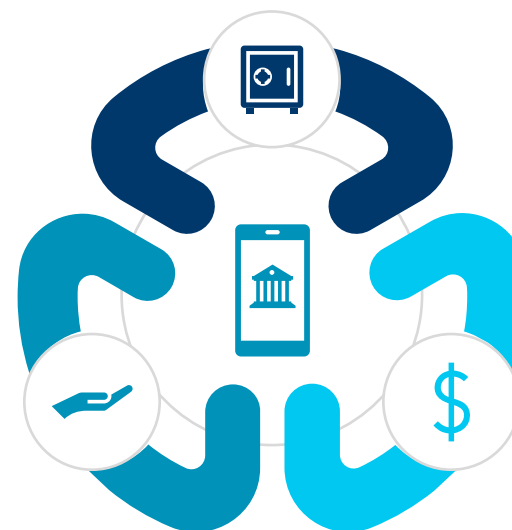
DEPOSIT
Users can have their paycheck deposited directly into their Wealthfront Cash Account and enjoy a 1.4% APY[1]

BORROW
With a Portfolio Line of Credit, users can borrow up to 30% of their investment portfolio

PAYMENT
Enable online bill payments to businesses (e.g. mortgage, credit card payments), friends, and families

[1]Annual Percentage Yield
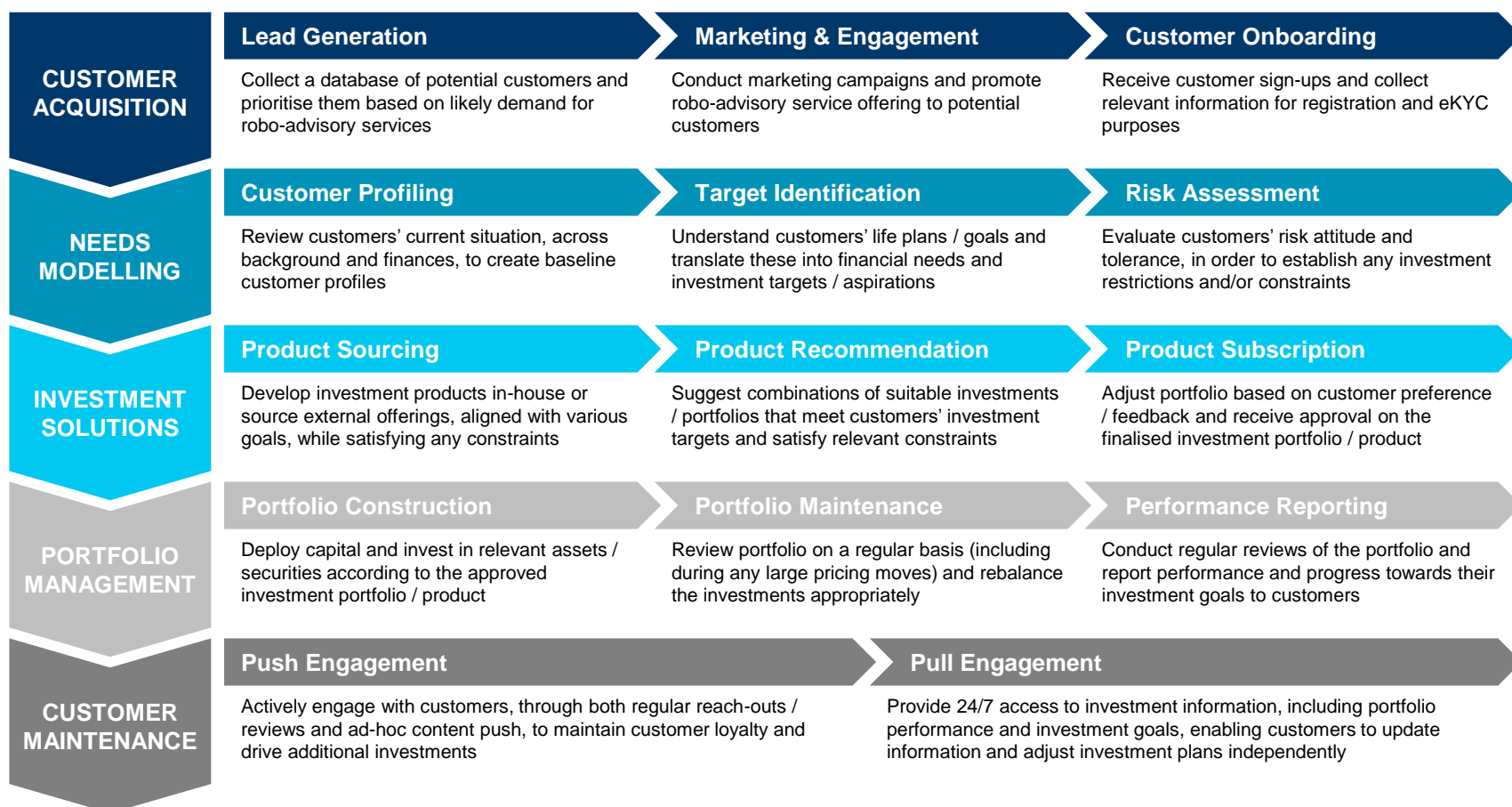Source: Wealthfront, Business Insider, Quinlan & Associates analysis

SECTION 4

IMPLEMENTATION CONSIDERATIONS

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CUSTOMER JOURNEY

The wealth management customer journey involves five steps (and various sub-steps), all of which are crucial in the development of a successful digital offering
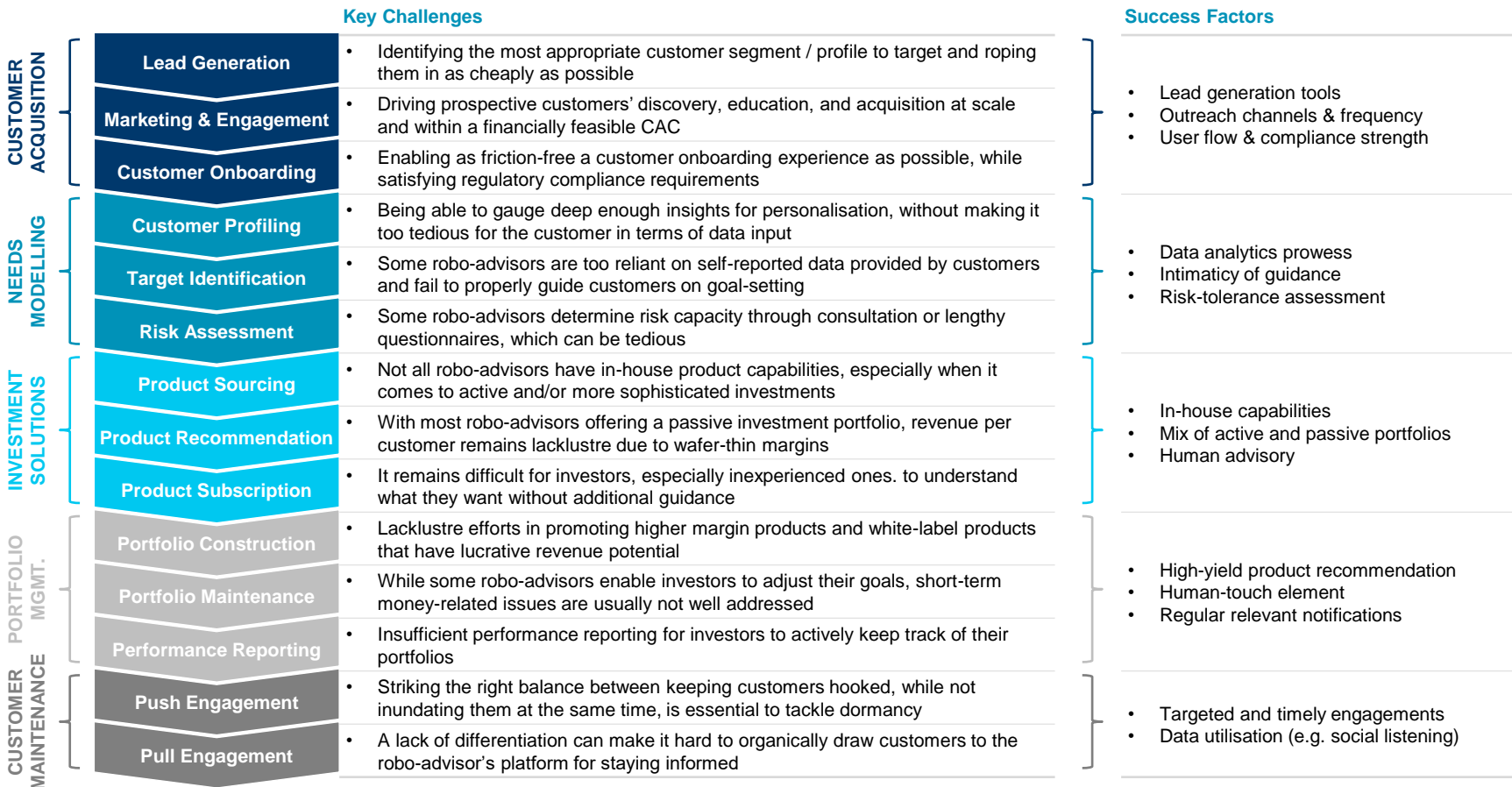
Customer Journey
Robo-advisory

CUSTOMER ACQUISITION	**Lead Generation** Collect a database of potential customers and prioritise them based on likely demand for robo-advisory services	**Marketing & Engagement** Conduct marketing campaigns and promote robo-advisory service offering to potential customers	**Customer Onboarding** Receive customer sign-ups and collect relevant information for registration and eKYC purposes
NEEDS MODELLING	**Customer Profiling** Review customers' current situation, across background and finances, to create baseline customer profiles	**Target Identification** Understand customers' life plans / goals and translate these into financial needs and investment targets / aspirations	**Risk Assessment** Evaluate customers' risk attitude and tolerance, in order to establish any investment restrictions and/or constraints
INVESTMENT SOLUTIONS	**Product Sourcing** Develop investment products in-house or source external offerings, aligned with various goals, while satisfying any constraints	**Product Recommendation** Suggest combinations of suitable investments / portfolios that meet customers' investment targets and satisfy relevant constraints	**Product Subscription** Adjust portfolio based on customer preference / feedback and receive approval on the finalised investment portfolio / product
PORTFOLIO MANAGEMENT	**Portfolio Construction** Deploy capital and invest in relevant assets / securities according to the approved investment portfolio / product	**Portfolio Maintenance** Review portfolio on a regular basis (including during any large pricing moves) and rebalance the investments appropriately	**Performance Reporting** Conduct regular reviews of the portfolio and report performance and progress towards their investment goals to customers
CUSTOMER MAINTENANCE	**Push Engagement** Actively engage with customers, through both regular reach-outs / reviews and ad-hoc content push, to maintain customer loyalty and drive additional investments	**Pull Engagement** Provide 24/7 access to investment information, including portfolio performance and investment goals, enabling customers to update information and adjust investment plans independently	

Source: Quinlan & Associates analysis

CHALLENGES AND SUCCESS FACTORS

There are a number of challenges that robo-advisors need to tackle – and success factors that they need to embrace – along the customer journey
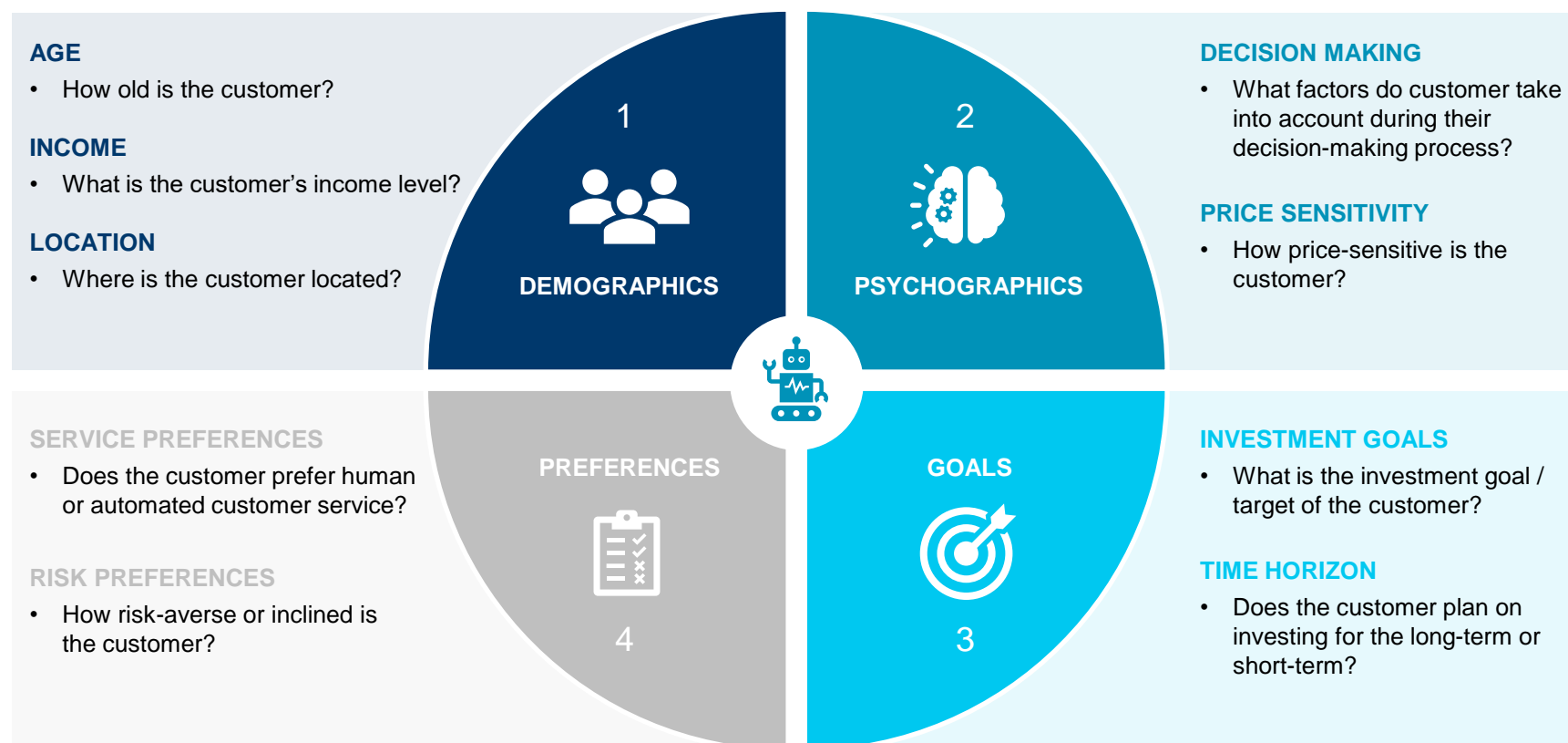
Customer Journey

Challenges and Success Factors

	Key Challenges	Success Factors
CUSTOMER ACQUISITION	**Lead Generation** • Identifying the most appropriate customer segment / profile to target and roping them in as cheaply as possible **Marketing & Engagement** • Driving prospective customers' discovery, education, and acquisition at scale and within a financially feasible CAC **Customer Onboarding** • Enabling as friction-free a customer onboarding experience as possible, while satisfying regulatory compliance requirements	• Lead generation tools • Outreach channels & frequency • User flow & compliance strength
NEEDS MODELLING	**Customer Profiling** • Being able to gauge deep enough insights for personalisation, without making it too tedious for the customer in terms of data input **Target Identification** • Some robo-advisors are too reliant on self-reported data provided by customers and fail to properly guide customers on goal-setting **Risk Assessment** • Some robo-advisors determine risk capacity through consultation or lengthy questionnaires, which can be tedious	• Data analytics prowess • Intimaticy of guidance • Risk-tolerance assessment
INVESTMENT SOLUTIONS	**Product Sourcing** • Not all robo-advisors have in-house product capabilities, especially when it comes to active and/or more sophisticated investments **Product Recommendation** • With most robo-advisors offering a passive investment portfolio, revenue per customer remains lacklustre due to wafer-thin margins **Product Subscription** • It remains difficult for investors, especially inexperienced ones. to understand what they want without additional guidance	• In-house capabilities • Mix of active and passive portfolios • Human advisory
PORTFOLIO MGMT.	**Portfolio Construction** • Lacklustre efforts in promoting higher margin products and white-label products that have lucrative revenue potential **Portfolio Maintenance** • While some robo-advisors enable investors to adjust their goals, short-term money-related issues are usually not well addressed **Performance Reporting** • Insufficient performance reporting for investors to actively keep track of their portfolios	• High-yield product recommendation • Human-touch element • Regular relevant notifications
CUSTOMER MAINTENANCE	**Push Engagement** • Striking the right balance between keeping customers hooked, while not inundating them at the same time, is essential to tackle dormancy **Pull Engagement** • A lack of differentiation can make it hard to organically draw customers to the robo-advisor's platform for staying informed	• Targeted and timely engagements • Data utilisation (e.g. social listening)

[1]Application Programming Interface
Source: Quinlan & Associates analysis

TARGET CUSTOMER PROFILING

As a first step, robo-advisors should narrow down their target market by identifying the demographics, psychographics, goals, and preferences of their customers

Customer Profiling
Demographics, Psychographics, Goals, and Preferences

AGE
- How old is the customer?

INCOME
- What is the customer's income level?

LOCATION
- Where is the customer located?

1 DEMOGRAPHICS

2 PSYCHOGRAPHICS

DECISION MAKING
- What factors do customer take into account during their decision-making process?

PRICE SENSITIVITY
- How price-sensitive is the customer?

SERVICE PREFERENCES
- Does the customer prefer human or automated customer service?

RISK PREFERENCES
- How risk-averse or inclined is the customer?

PREFERENCES 4

GOALS 3

INVESTMENT GOALS
- What is the investment goal / target of the customer?

TIME HORIZON
- Does the customer plan on investing for the long-term or short-term?

Source: Quinlan & Associates analysis

CHANNEL STRATEGY (THE 3 C's)

Subsequently, robo-advisors should implement a robust marketing strategy to facilitate their customer acquisition efforts, focusing on channels, content, and cadence

Channel Strategy (The 3 C's)
Channels, Content, and Cadence

1
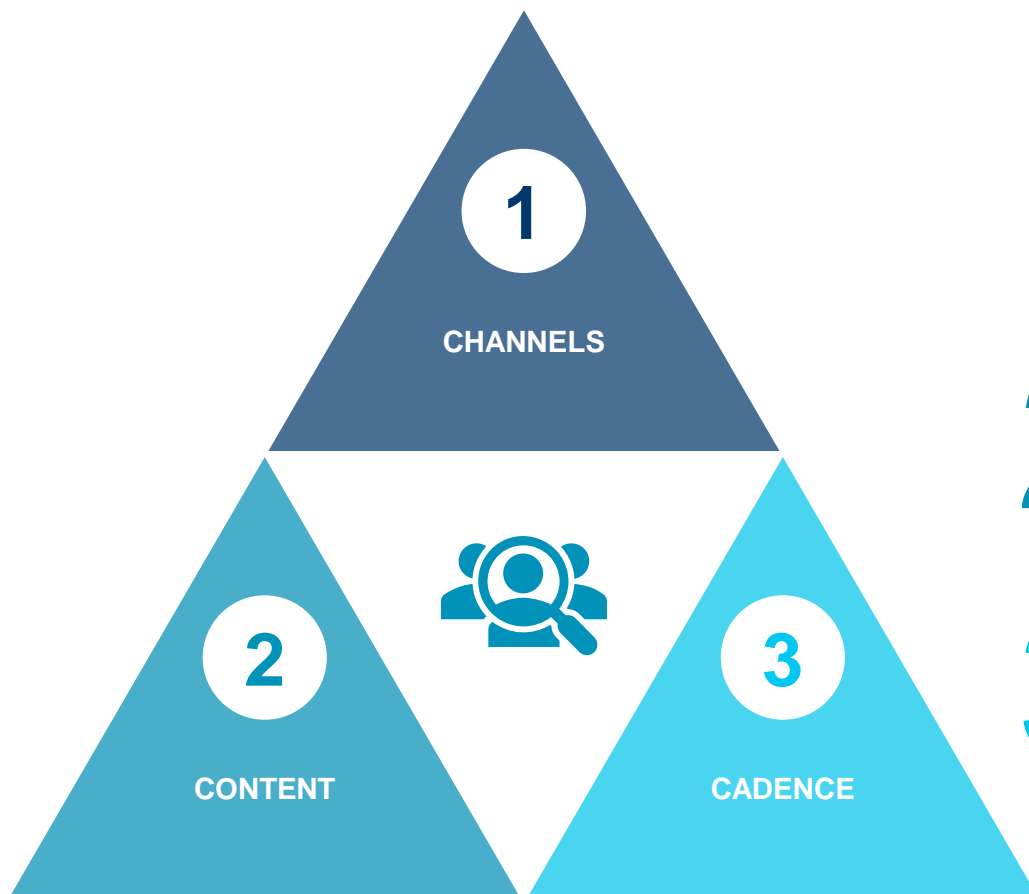
1 CHANNELS

CHANNELS
Leverage appropriate marketing channel(s) (e.g. social media, influencers) to increase brand awareness to the right target audience

2

2 CONTENT

3 CADENCE

2 CONTENT
Create digestible and engaging content (e.g. expert-led, customer stories) to ensure effective delivery of core messages

3 CADENCE
Strike the right balance between driving visibility and avoiding smothering target customers at the same time

FOCUS ON ROI

Source: Quinlan & Associates analysis

PRODUCT MIX

The product mix of robo-advisors can be enriched by a variety of investment products, other financial services (e.g. banking, brokerage), as well as B2B solutions

Product Mix
Robo-advisors

Product 1	Product 2	Product 3	Product 4	Product 5
			+Insurance	+WealthTech Offering
			+Digital Brokerage	
	+Bonds	+Index Construction	+Digital Banking	
	+Mutual Funds	+Fund Creation		
	+Individual Stocks	+Customised Solutions		Product 5 B2B Solutions
	+Private Equity			
	+REITs[1]		Product 4 Financial Ecosystem	
+ETFs		Product 3 Private-label Products		
+Cash Reserves	Product 2 Active Products			
Product 1 Passive Products				
Offer a diverse range of ETFs for customers to build passive portfolios	**Leverage additional inputs to provide more flexible and active products**	**Construct preferred in-house private-label investment products**	**Create an ecosystem of financial services covering customers' holistic needs**	**Provide B2B WealthTech solutions to empower traditional players**

B2B

PRICING

Various pricing strategies could be adopted by robo-advisors to actively compete for market share, along the company lifecycle, depending on the level of market saturation

Pricing Strategies
Robo-advisors

FEE LEVEL

HIGH

| PREMIUM PRICING | PRICE SKIMMING |

LOW

| PENETRATION PRICING | ECONOMY PRICING |

LOW   HIGH

MARKET SATURATION
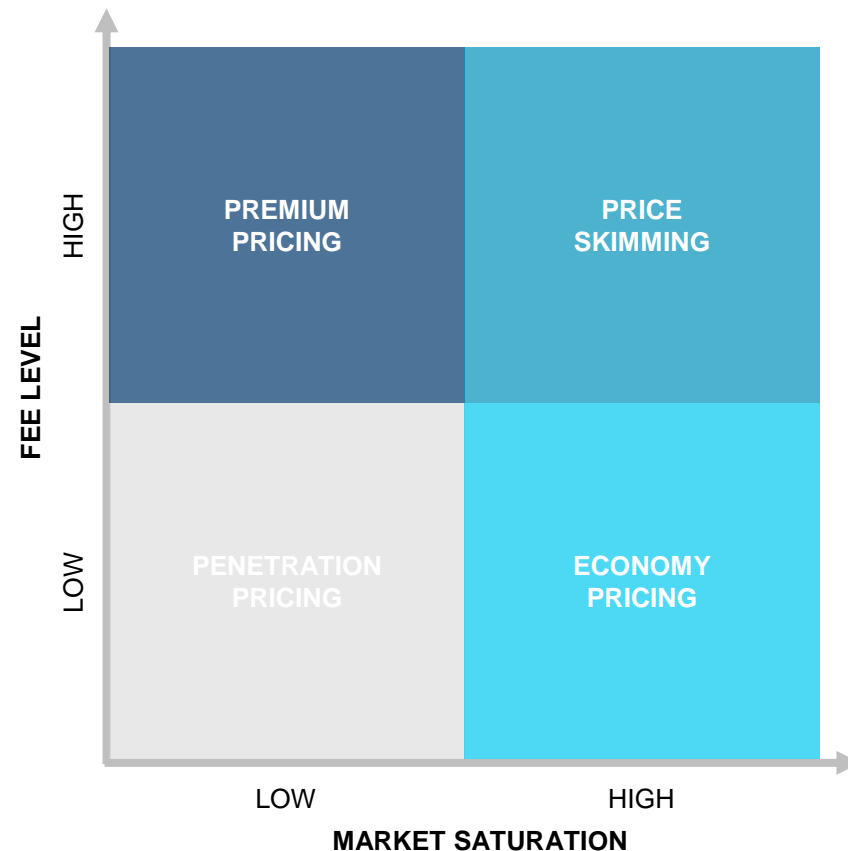
Pricing Strategies

Premium Pricing
Impose a high fee to enhance the perceived value of the robo-advisor's proposition, backed by a premium-worthy differentiated offering, while simultaneously earning a wider profit margin

Price Skimming
Charge a high initial fee to gather more affluent investors and gradually decrease fees to target customers down the wealth curve, gradually capturing a wider customer base

Economy Pricing
In a saturated market, robo-advisors would have to undercut their competitors by charging a lower price to wrestle away greater market share

Penetration Pricing
To enter or penetrate new markets, robo-advisors can set a low initial fee to attract investors and gain recognition before adopting an alternate pricing strategy

PARTNERSHIPS

When selecting a traditional peer to partner with, robo-advisors should conduct a holistic strategic due diligence exercise

Partnership Selection
Evaluation Criteria

Customer Reach

Size of current customer base, with a preference for a large, non-overlapping base to facilitate new customer acquisition at a low cost

Distribution Channels

Range of distribution and marketing channels to efficiently reach groups of target customers, in order to capture a significant AuM

Value Proposition Alignment

Potential synergies and brand alignment with the prospective partner to ensure that there are no inconsistencies that may impair brand reputation

Existing Capabilities

The ability of the potential partner to leverage its existing infrastructure and talent to enhance the robo-advisor's existing offerings / create new ones

Regulatory Requirements

Whether the potential partner has the required licenses and/or capability and resources to acquire additional licenses for further expansion

Technology Sophistication

Existing capabilities of the partner's technological systems to launch new robo-advisory products or to be compatible with the robo-advisors' offering

⬡ Strategic   ⬢ Operational

REGULATIONS

When expanding to other service offerings, data privacy safeguards, appropriate licensing, and anti-trust regulatory approval are major considerations to be aware of

Horizontal Expansion
Regulatory Compliance
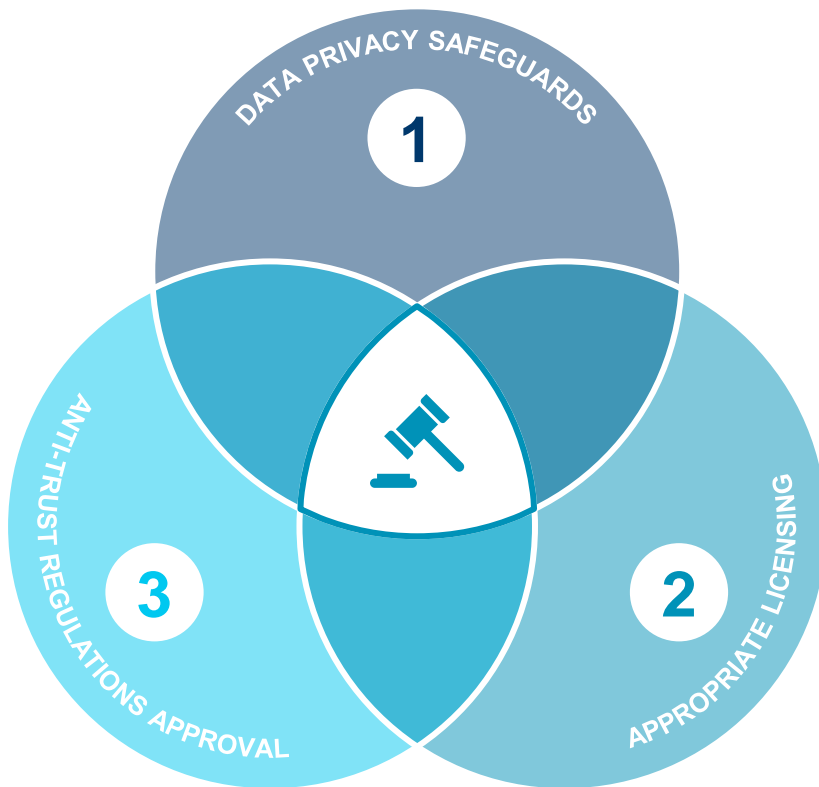
Data Privacy Safeguards

As more and more customer data is collected and stored, proper safeguards need to be in place to protect data

Appropriate Licensing

When venturing into a new arena, like digital banking or brokerage, robo-advisors will need to secure additional licenses

Anti-trust Regulations Approval

In the event of an inorganic acquisition, such as to build a financial super app, anti-trust laws should be kept in mind

Source: Quinlan & Associates analysis

SECTION 5

OPERATIONAL LEVERS

QUINLAN
&ASSOCIATES

UNDERLYING CAPABILITY REQUIREMENTS

To efficiently execute operations along each step of the customer journey, robo-advisors need to develop a wide array of digital capabilities

Customer Journey
Capabilities Mapping

Capability	CUSTOMER ACQUISITION			NEEDS MODELLING			INVESTMENT SOLUTIONS			ASSET MANAGEMENT			CUSTOMER MAINTENANCE	
	Lead Generation	Marketing & Engagement	Customer Onboarding	Customer Profiling	Target Identification	Risk Assessment	Product Sourcing	Product Rec.	Product Subscription	Portfolio Construction	Portfolio Maintenance	Performance Reporting	Push Engagement	Pull Engagement
Customer Management	✓	✓												
Customer Engagement		✓											✓	
Content Distribution		✓											✓	
Information Collection			✓											✓
User Profiling				✓	✓	✓								
Data Analytics				✓	✓	✓	✓							
Risk Management						✓	✓				✓			
Portfolio Management								✓	✓		✓	✓		
Trade Execution										✓	✓			
Compliance / Reporting											✓	✓		
Customer Service														✓

✓ Applicable

Source: Quinlan & Associates analysis

CUSTOMER ACQUISITION

Robo-advisors need to be able to identify relevant leads and convert them into customers in a streamlined manner

Customer Acquisition
Set-Up

Back-End Modules

| Customer Analytics | Customer Rel. Mgmt. | Content Distribution | Onboarding & eKYC |

Front-End Portal

| Branding | Dashboard | Self-Service |

Human Advisor
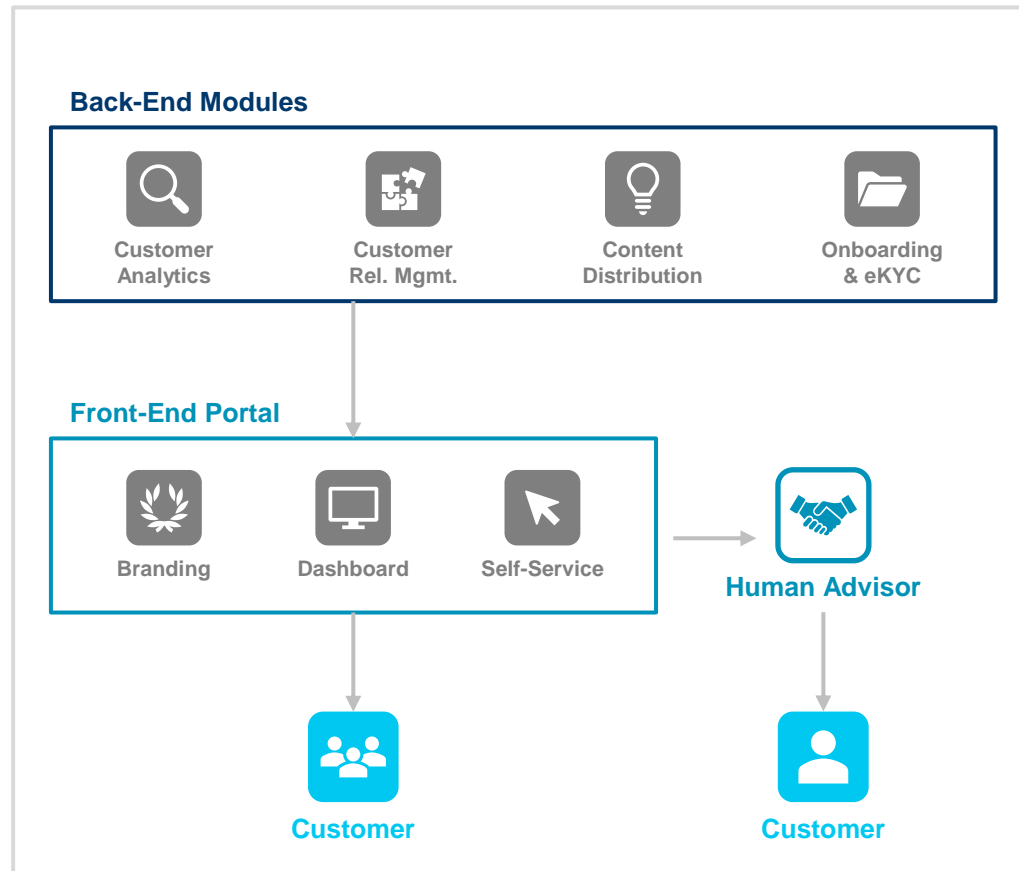
Customer

Customer

Operational Considerations
Customer Acquisition

Interactive Interface
The robo-advisor should display the most relevant messages / information for the customer, making the interface user-friendly to deliver a great user experience

Seamless Journey
Given that the customer onboarding process can be full of points of friction, it needs to be as seamless as possible, with an appropriate eKYC solution in place

Agile Deployment
Robo-advisor need to revamp and offer enhanced experience quickly – across design and function – which necessitate solutions that support agile development / deployment

Behavioural Analytics
More advanced solutions enable big data analytics, further enhancing the accuracy of lead generation and the efficiency of customer engagement

NEEDS MODELLING

The needs modelling process requires consideration of data from multiple sources, in order to best understand the customer's needs on an ongoing basis

Needs Modelling
Set-Up

Existing Data   **Self-Diagnosis**   **Advisor Input**   **Behavioural Data**

Data Analytics

Customer Profile   **Investment Target**   **Risk Profile**

Initial analysis provides a baseline understanding of the customer's needs and circumstances, which is updated and refined on a regular / ongoing basis using additional input and behavioural data

Initial Input   Ongoing Input
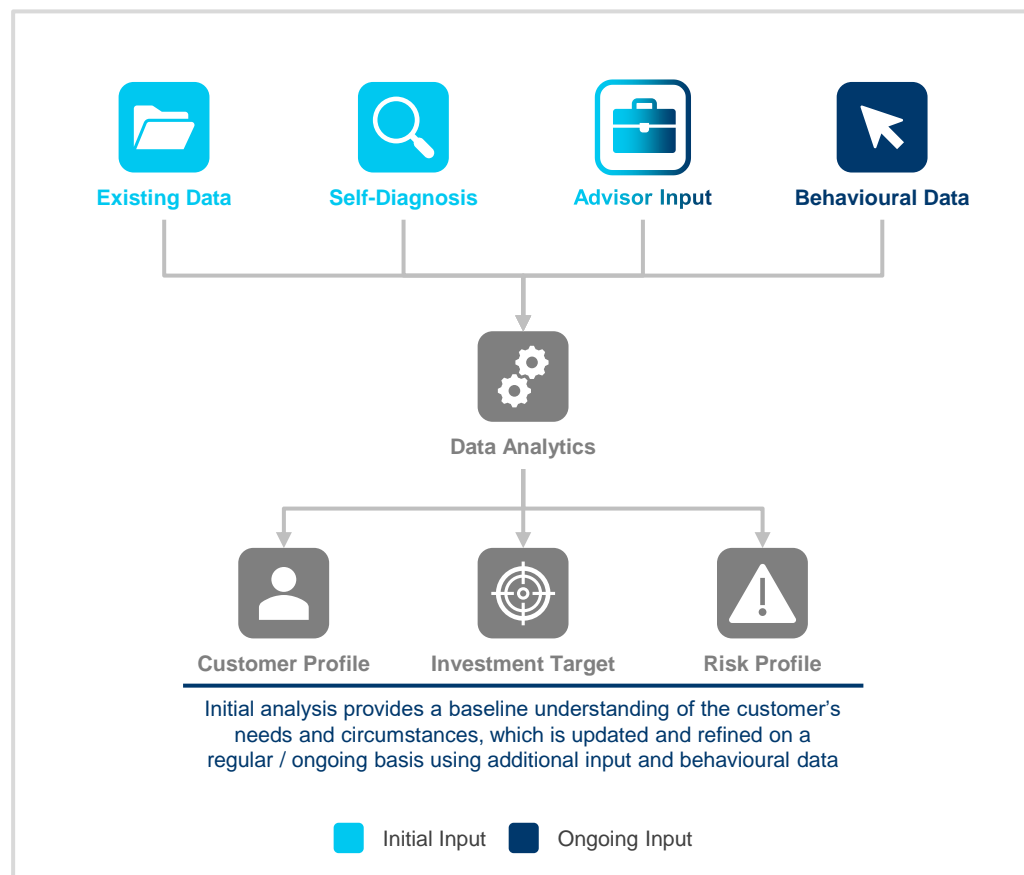
Operational Considerations
Needs Modelling

Regulatory Compliance
All needs modelling modules need to comply with regulatory requirements, especially around understanding customers' needs / expectations and satisfying fiduciary duties

Existing Data
Players diversified outside of just robo-advisory may have already collected large datasets on existing customers, and data analytics solutions need to work with these datasets

Data Incorporation
Data analytics modules should be able to incorporate any new datasets into the analysis in a consistent manner, to provide accurate insights around customers

Advanced Analytics
Robo-advisors are increasingly looking at more sophisticated analytics, leveraging big data and A.I. / machine learning, to further the understanding of their customers

INVESTMENT SOLUTIONS

Based on a holistic understanding of the customer's needs, the investment offerings needs to source and combine multiple products into a relevant portfolio

Investment Solutions
Set-Up

WM Proprietary Product

Third-Party Product

Third-Party Product

WM Sourcing Channel

Solution Sourcing Channel

Product Catalogue

Portfolio Recommendation

Advisor Input

Automated Recommendation

Customer Preference
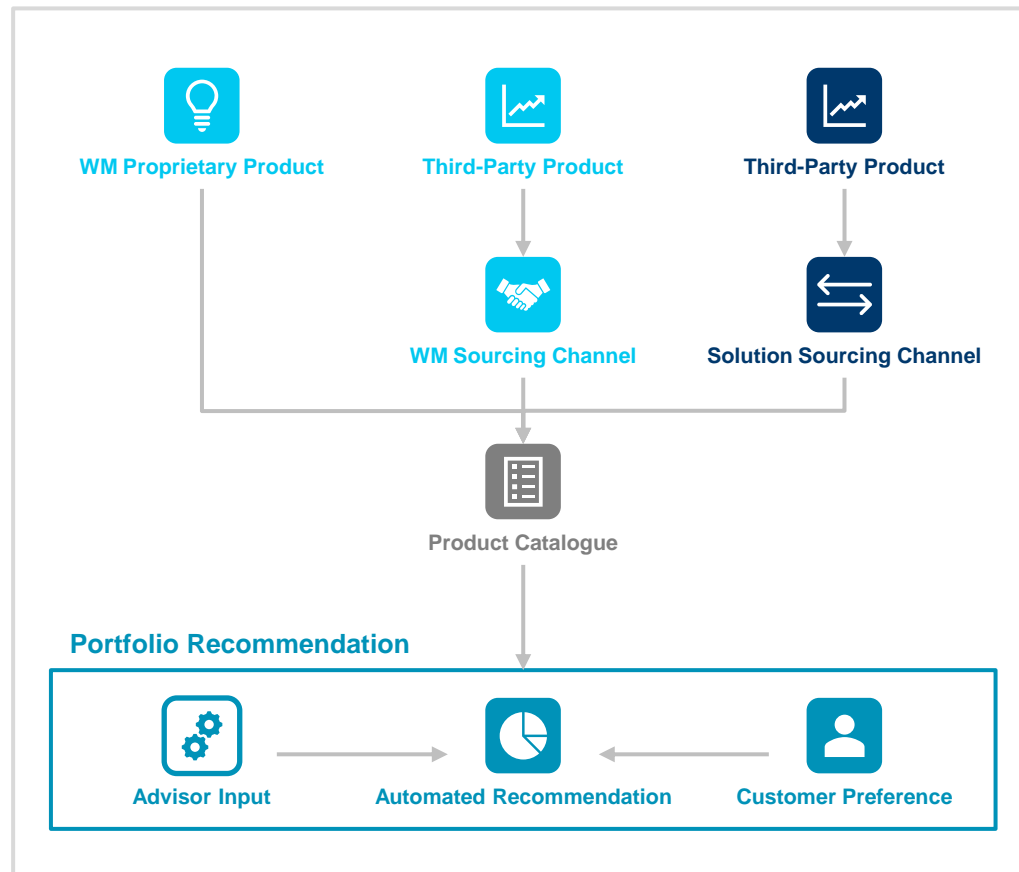
Operational Considerations
Investment Solutions

Regulatory / Internal Obligations
All recommended portfolios need to satisfy regulatory (and internal) requirements on customer suitability and fiduciary duties, to ensure appropriateness and relevance

Data Analytics
Portfolio recommendation module should be able to analyse relevant product and customer information, to recommend a portfolio that satisfies customer expectations and constraints

Discretionary Adjustments
The solution should be able to adjust the baseline portfolio recommendation, based on inputs from the adviser and customer to better reflect investment needs / constraints

Sophisticated Products
Customers, especially more sophisticated and high-income ones, should be able to access more sophisticated products, such as PE / VC funds, derivatives, and digital assets

Source: expert interview, Quinlan & Associates analysis

PORTFOLIO MANAGEMENT

Portfolio management modules need to execute orders / transactions in a manner that is compliant with regulatory requirements, especially with regards to best execution

Portfolio Management
Set-Up
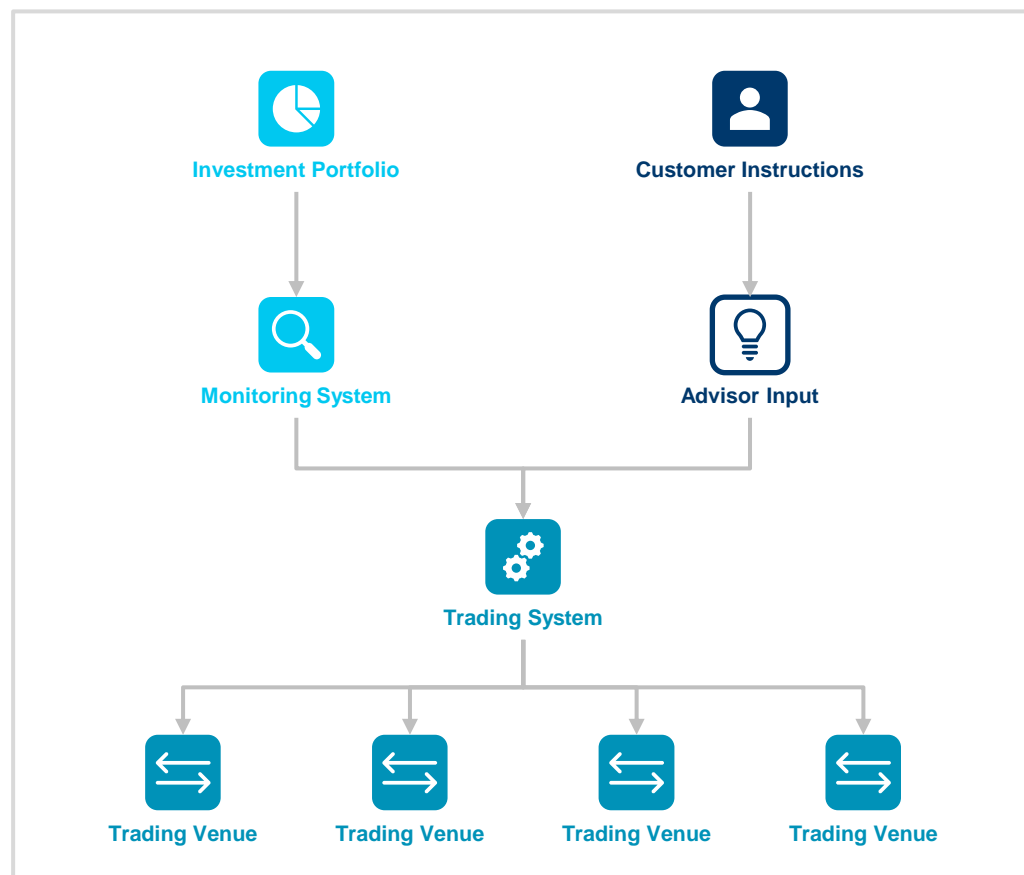
Operational Considerations
Portfolio Management

Best Execution
Trades need to be executed in the customers' best interests, satisfying all best execution requirements (or similar), taking into account multiple trade-related factors

Automated Reporting
Module should be able to automatically extract relevant insights from the portfolio, comparing results against customer objectives to explain portfolio performance and investment progress

Venue Access
Access to multiple trading venues enables better execution and larger-volume trading, potentially delivering better trading and investment results / performance

Advanced Strategies
Wealth managers may be looking for systems that can handle more sophisticated trading strategies, in order to achieve better trading performance to deliver stronger returns

CUSTOMER MAINTENANCE

Customer maintenance modules should drive both push and pull engagement, to maintain relationship between the robo-advisor and its customers

Customer Maintenance
Set-Up

Operational Considerations
Customer Maintenance

CRM System

Inv. Research

Portfolio Performance

Additional Content

Human Advisor

Self-Service Portal
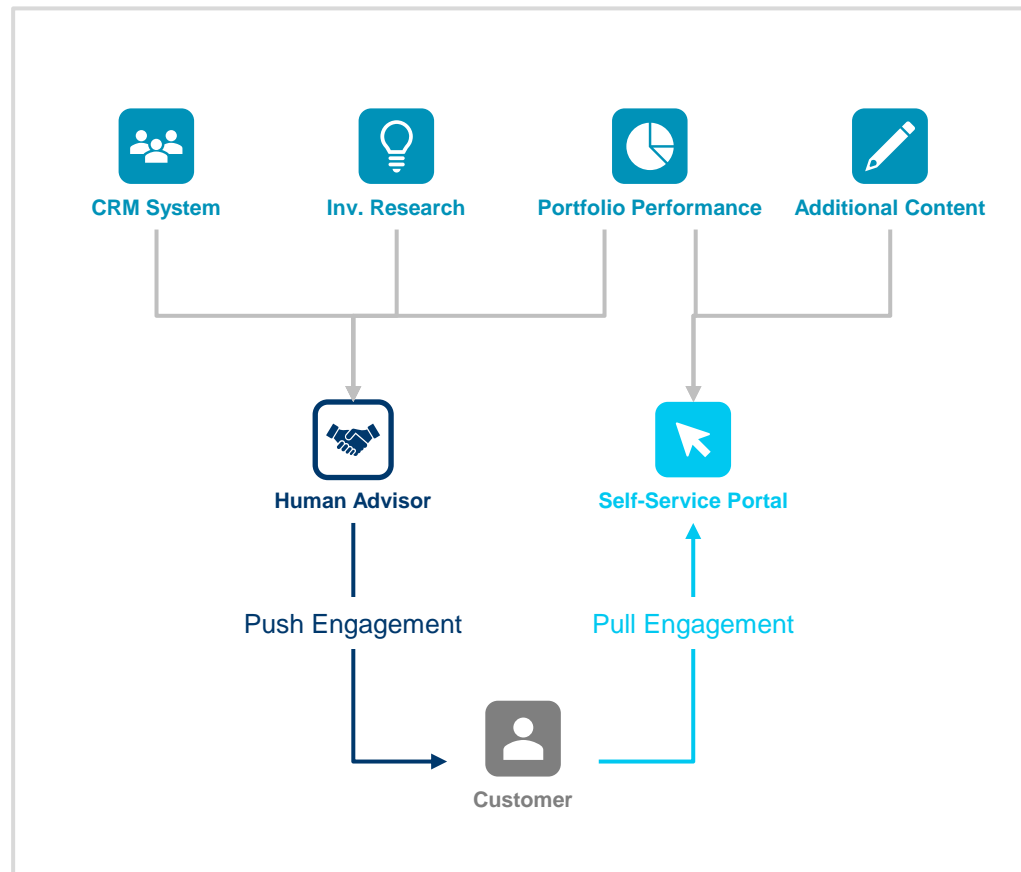
Push Engagement

Pull Engagement

Customer

Engagement Tracking

The engagement solution should offer a tracking function to document engagement with customers, to record changes in investment objectives and life circumstances

Automated Reminder

Based on portfolio / investment needs and interests, the system should either remind the human advisor to reach out to the customer or send a push notification by itself to drive engagement

Behaviour Analytics

Based on a customer's engagement with the human advisor / robo-advisory portal, the system should be able to identify and push content that best draws a customer's interest

Content Sourcing

The platform may be able to generate and / or source related content from third parties, in order to provide a more holistic platform to drive engagement with customers

SECTION 6

QUINLAN & ASSOCIATES

QUINLAN
&ASSOCIATES

HOW WE CAN HELP

We can help robo-advisors develop a granular understanding of the market dynamics, form an optimal strategic blueprint, and then successfully bring it fruition

Areas of Expertise
Quinlan & Associates

DEMAND-SIDE	SUPPLY-SIDE	STRATEGY	OPERATING MODEL	IMPLEMENTATION
Provision of in-depth colour around the demand dynamics:	Deep-dive evaluation of competitive landscape:	Development of end-to-end strategy blueprint, including:	Review of the holistic operating model set-up, including:	Project execution support, including:
• Analysis of key trends within specific target markets	• Competitor analysis (e.g. benchmarking, gap analysis)	• Target customers	• People / talent	• Buy / build / partner advice
• Customer analysis (e.g. segmentation, profiling, review of pain points and preferences, etc.)	• In-depth peer case studies to evaluate product offering, pricing, distribution strategies, licensing, etc.	• Product / service offering	• Organisation / governance	• M&A support
		• Pricing (model & fee level)	• Operations / processes	• Partner screening
		• Marketing (online & offline)	• Risks / compliance	• Project team set-up
• Demand driver / decision-trigger analysis	• Evaluation of peer USPs / core value propositions	• New market entry	• IT Infrastructure	• Workstream formation
• Evaluation of demand gaps	• Identification of supply gaps / industry white space	• P&L optimisation	• Harnessing data	• Milestones mapping
• Market sizing		• Inorganic growth		• Timeline establishment
				• Stakeholder management

| *Identify market opportunities that are ripe for the taking* | *Gauge feasibility by analysing the competitive landscape* | *Develop a tailored strategy and full business case* | *Align internal operations to ensure successful execution* | *Provide ongoing support for implementation* |

Source: Quinlan & Associates analysis
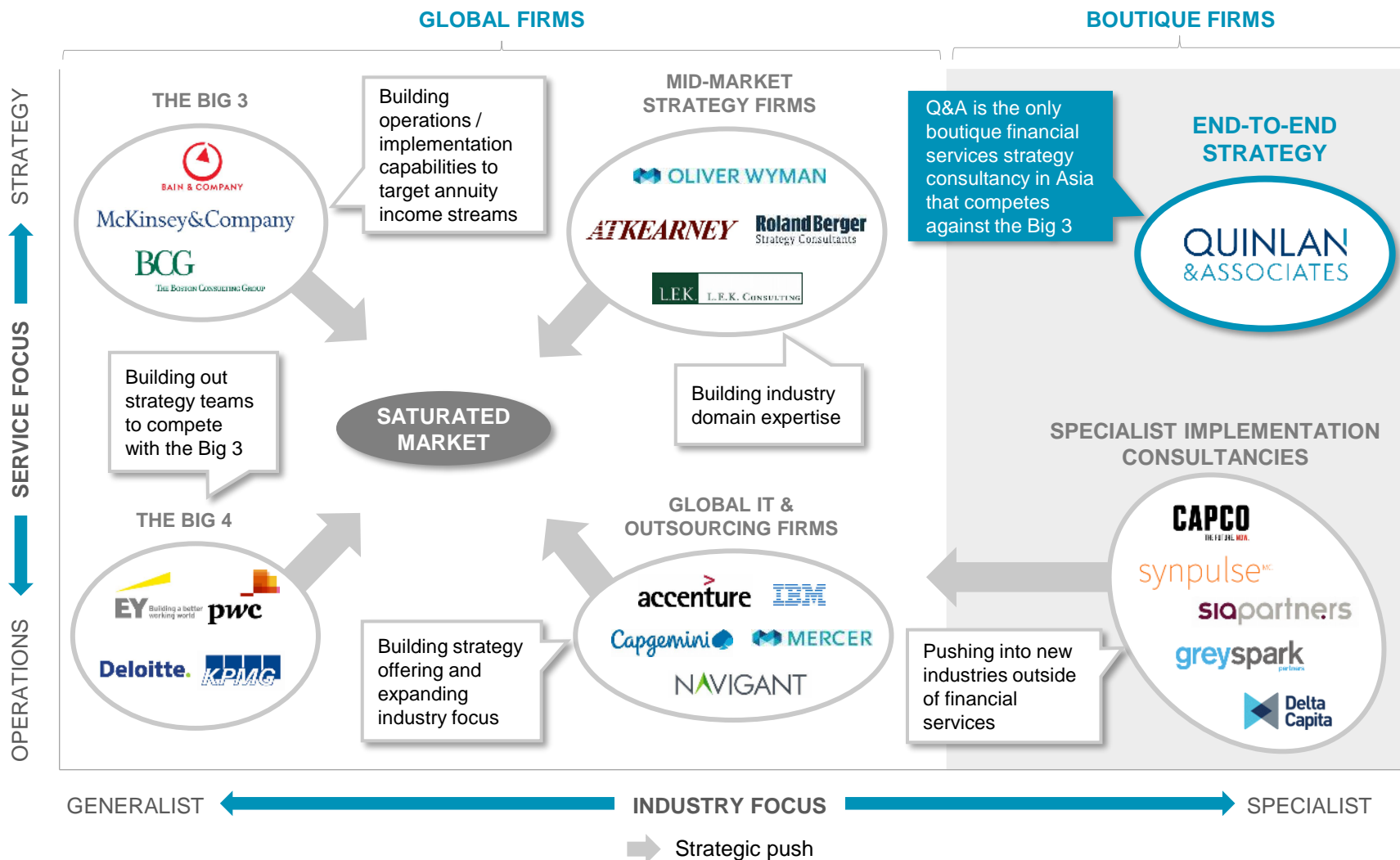
OUR APPROACH

We provide unbiased, independent advice that is tailored uniquely to each and every client and supported by robust, data-driven analysis

		GLOBAL CONSULTING FIRMS	QUINLAN &ASSOCIATES
STEP 1	**PROJECT ORIGINATION**	• Initial client meeting to discuss related global marketing collateral • Consulting firm proposes their ingoing hypotheses about the client's problem • Project proposal is built around upfront hypotheses and typically based on the outcomes a previous comparable project	✓ Initial meeting focused on discussing specific strategic issues facing the client ✓ Client problems and objectives are reviewed in detail using our experience and insights on the subject matter ✓ Project proposal tailor-made to address the client-specific problem in question
STEP 2	**PROJECT EXECUTION**	• Junior team staffed on project • Relevant macro/industry research from a related project is recycled for the client • Client information is repackaged and delivered back to them as a considerable part of the project deliverables • Field work and interviews are designed to reinforce ingoing hypotheses	✓ Senior team staffed on project ✓ All macro/industry research is built specifically around the client's situation ✓ Client information is analysed in detail to draw out key value-add insights ✓ Fieldwork and interviews are designed to validate insights from data analysis
STEP 3	**PROJECT OUTPUT**	• A considerable amount of 'blue sky thinking' and 30,000 feet ideas that lack any tangible action points, which can represent up to 80% of project output • Minimal or non-existent post-project support around business case development, execution, reporting, and communication, which is left to the client	✓ Output remains focused on addressing the specific client problem in question ✓ Tangible action items are developed around relevant project conclusions ✓ Client is provided with upfront execution support; and can also engage Quinlan & Associates for all other services along the entire strategic value chain

OUR DIFFERENCE

We are not your typical strategy consulting firm; our distinctive approach differentiates us from our global competitors across ten key dimensions

	CRITERIA	GLOBAL CONSULTING FIRMS	QUINLAN &ASSOCIATES
1	OFFERING	• Narrow service offering focused on a single aspect of the strategy value chain (e.g. strategy development)	✓ End-to-end service offering across the entire strategy value chain, from development to execution
2	METHODOLOGY	• Hypothesis-led inductive reasoning: upfront conclusions that are validated over the course of a project	✓ Fact-based deductive reasoning: conduct in-depth data-driven analysis to arrive at appropriate conclusions
3	OBJECTIVITY	• Advice is often tailored to suit senior management agendas, rendering projects a rubber-stamping exercise	✓ Advice remains objective and unbiased; we will tell you what you don't want to hear if it's the right advice for you
4	RELEVANCE	• '30,000 feet' content in excessively long decks, which are expensive and lack concrete deliverables	✓ Output is clear and to the point; we provide actionable advice supported by tangible execution plans
5	MEASURABILITY	• Results are often hard to quantify, with project 'success' difficult to both isolate and measure	✓ We deliver results that you can actively measure and track (e.g. identify KPIs, build implementation trackers)
6	EXPERTISE	• Staffed with generalist career consultants who lack sector expertise or industry experience	✓ Projects are led by seasoned consultants with extensive financial services and top-tier consulting experience
7	ENGAGEMENT	• Project work and client contact led by a junior team, with minimal Partner contact	✓ Projects led by a senior and highly experienced team, with extensive Partner contact
8	STEWARDSHIP	• A significant amount of proprietary and competitor data is manufactured for projects	✓ All proprietary data is extensively validated through our industry sources and all estimates are clearly explained
9	CONTINUITY	• Advising you on a one-off project and walking away from your business when it's complete	✓ Developing long-term, strategic relationships with key clients across their growth / repositioning journey
10	VALUE	• Projects usually start at USD 80,000 per week, driven by large company overheads	✓ Competitive pricing reflects minimal operational overheads and a strong focus on cost control

OUR EDGE

Unlike global consultancies, we also service much smaller clients (including FinTech start-ups and SMEs), which are typically not serviced by other consulting houses

	1	**2**	**3**
CLIENT TYPE	**Regular users of management consultants**	**Occasional users of management consultants**	**Little or no experience with management consultants**
EXAMPLES	• Global investment banks • Top-tier asset managers • National stock exchanges • Multinational companies (MNCs)	• Hedge funds • Aspirant regional banks • Mid-market brokerages • Middle market enterprises (MMEs)	• Start-ups • Growth-stage FinTechs • Small-to-medium enterprises (SMEs)
OUR EDGE	*Independent advice, deep industry expertise and readily-executable solutions with the ability to effectively measure and track results*	*Experience and extensive know-how of top-tier financial institutions using a more cost-effective approach than global consulting firms*	*Access to the thought processes, strategies, and operational best-practices of the world's leading organisations with immediate impact, with a flexible fee model*

☐ **Critical "white space" not serviced by global consulting firms**

INTERNATIONAL CAPABILITIES

We combine global project experience with an in-depth understanding of the Asia Pacific region across developed, emerging, and frontier markets

TEAM EXPERIENCE
BY CLIENT REGION

- Led major projects for global financial institutions and leading startups
- Projects focused on regulatory, business unit, and international growth strategies

- Led over 40 projects for multinationals, MMEs, and SMEs
- Expert working knowledge of local jurisdictions and regulatory frameworks
- Intimate understanding of the regional economic landscape, financial markets, and domestic operating environments
- Strong appreciation of local corporate culture and working styles

THE AMERICAS

Canada

United States

Brazil

- Projects for investment banks, established FinTechs, and SMEs
- Projects focused on digital innovation, peer benchmarking, and offshore growth strategy

EMEA

UK
Germany
France
Switzerland
Spain
Italy
Israel
Senegal
Nigeria
Uganda
Kenya

ASIA PACIFIC

China
Japan
Korea
Taiwan
Hong Kong
Thailand
India
Vietnam
Philippines
Singapore
Malaysia
Indonesia
Australia
New Zealand

OUR EXPERIENCE

Our team has considerable experience advising many of the world's leading multinationals, SMEs, and innovative startups on a variety of high-profile engagements

Global Banks

- Group strategy
- Digital transformation
- Market entry (JV and inorganic strategies)
- Operating model
- Process optimisation
- Regulatory strategy
- Data strategy
- HR / talent strategy
- Cultural transformation
- Organisational design
- Cross-business collaboration
- Coverage optimisation
- Cost minimisation
- Corporate training

Market Infrastructure & Corp. Services

- 'Go-to-market' strategy
- Product development
- Partnerships and ecosystems
- Pricing strategy
- Corporate training
- Sales strategy
- Data strategy (optimising internal workflows and new revenue capture)

Asset Managers / Family Offices / VCs
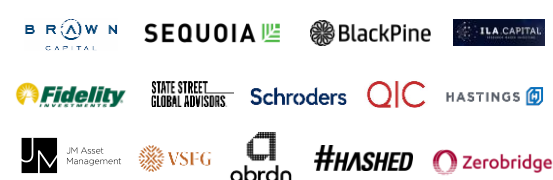
- Fund Strategy
- Digital build-out / transformation
- Industry / competitor intelligence
- Commercial due diligence
- Operating / pricing model validation
- Portfolio company strategy
- Front-end UI design

Regional Brokers & Bancassurers

- Group strategy
- Long-term strategic growth planning (organic / inorganic),
- Digital enablement and innovation
- Data strategy
- Organisational / HR strategy and cultural transformation
- Developing company vision statements
- Enhancing cross-business synergies

FinTech Companies

- Industry validation
- B2B strategy development
- USP development and branding strategies
- Thought leadership
- Operating model design
- Strategic due diligence
- White-labelled pitches
- Peer benchmarking
- New market entry
- Corporate training
- Licence applications

Non-Financial Services

- Development of group-level strategy
- New market entry
- Open innovation and digital transformation
- Customer engagement
- Industry and market research
- Brand building / market awareness
- Employee enablement (i.e. corporate training)

Note: various client logos cannot be provided due to client confidentiality; includes both in-house roles and consulting projects with Q&A and former employers

CLIENT TESTIMONIALS

We pride ourselves on flawless project delivery, and make it our mission to deliver work of the very highest standard that is uniquely tailored to each and every client

dealogic

"I truly appreciate Q&A's end-to-end consulting service. They made a genuine effort to understand our opportunities and challenges, and tailormade a strategic solution that enabled us to capture key opportunities. Their expertise, approach, and market connectivity allowed ensured their solution could be put to day-to-day use by our staff. Q&A really deliver strategy with a difference."

Joanne Hon, Former Head of Asia Pacific

#HASHED

""Q&A worked closely with us to better understand Hashed. Their industry knowledge and research ability exceeded our expectations, which helped produce tailored outcomes we were hoping for by engaging their services. We truly appreciated their attention to detail and professionalism, combined with their penchant for perfection."

Simon Kim, CEO & Managing Partner

smartkarma

"We have worked with Q&A on a number of projects. Their work is rigorous and of a very high quality, which has proved to be useful and insightful as we grow our business. It has also proved attractive to a broader audience of stakeholders, including investors, customers, prospects and the media."

Jon Foster, Co-Founder

prattle

Q&A was extremely thorough and easy to work with. As a team of PhDs, we are very particular about research quality and the Q&A team exceeded our expectations. Their ability to delve into a topic and build a coherent framework around that subject matter and present it in a clear, concise manner is impressive.

Evan Schnidman, CEO

Emotics

"Q&A have been an absolute pleasure to work with. They have over-delivered every step of the way, kept clear lines of communication open, and have been available at the drop of a hat to hop on a call to provide strategic advice as issues have arisen. The insights they provide derives from the deep industry knowledge of the partners, and the tireless research and professionalism of their associates.

Ray Horan, CEO

Kenetic

"Q&A were instrumental in helping us develop our strategic pitch and articulate the core parts of our business in a very concise way. Their knowledge of crypto, finance and technology made them the ideal partner for such an exercise, and the strategic collateral produced has been multi-purposed for various different stakeholders of ours."

David Wills, CEO

nest

"Q&A took the time to really understand our business and the industry, which resulted in strategy reflecting our mission, culture, and voice. They produced a finished product far more professional than we could have conceived of ourselves, the benefit of their independent, sharp team."

Lawrence Morgan, CEO

Zerobridge

"Q&A did an excellent job developing our strategic pitch. They have a deep understanding of the financial services and tech industries, which was extremely helpful in helping us define and articulate our unique business model and future strategy. Q&A created a high-quality product in a very short amount of time; they were diligent and responsive to our requests."

Rahul Kotwal, CEO & Managing Partner

INDUSTRY INSIGHTS

We are widely recognised as a global thought leader in the financial services industry and are the only consulting firm to have our research distributed on Bloomberg terminals

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THE WEAKEST LINK

CRACKING THE CODE

TRADING UP

A TURN OF E-VENTS

BRANCHING OFF

END OF THE OPT-IN ERA

TIME TO (EX)CHANGE

THIRD-PARTY PUBLICATIONS

Our work is regularly cited by third-party publications of leading international banks, think tanks, research houses, consultancies, professional associations, and industry bodies

THIRD-PARTY PUBLICATIONS
SELECT CITATIONS

70+
THIRD-PARTY PUBLICATIONS
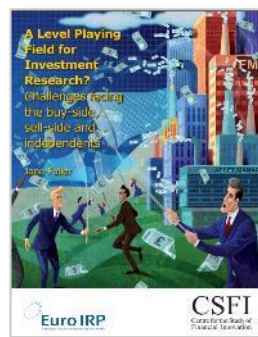
IN THE MEDIA

We are one of the most widely quoted strategy consultancies in the world across all leading financial and mainstream media publications

40+
TELEVISION / RADIO INTERVIEWS

1,500+
GLOBAL PRESS CITATIONS
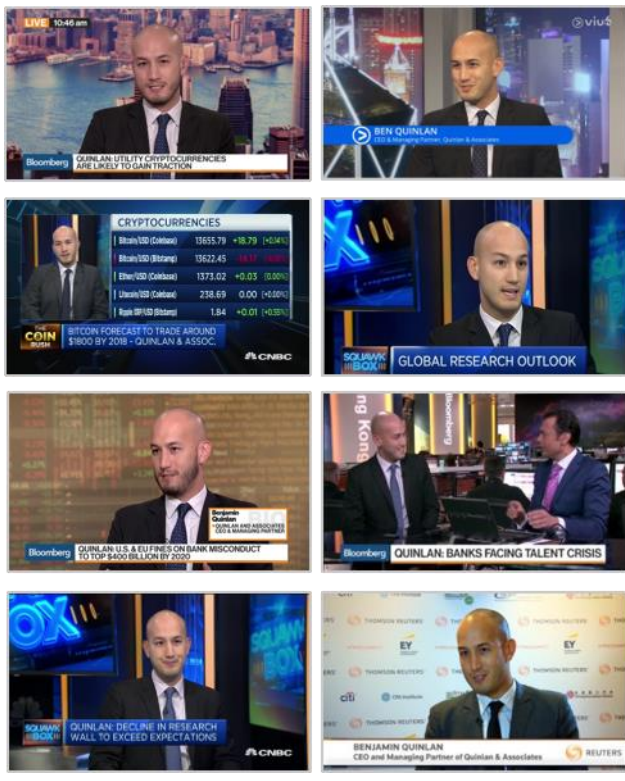
Includes Bloomberg, CNBC Squawk Box, Thomson Reuters, CNA, and ViuTV

INDUSTRY CONFERENCES

Our Partners are regularly invited to present our insights during keynote speeches and panel discussions at leading industry conferences across the globe

200+
SPEAKING ENGAGEMENTS

INDUSTRY CONFERENCES
SELECT EVENTS

PARTNERS

Partners at Quinlan & Associates are highly experienced industry professionals, combining best-practice strategic thinking with deep commercial acumen

BENJAMIN QUINLAN
CEO & MANAGING PARTNER

Benjamin is the CEO and Managing Partner of Quinlan & Associates. He is also the ex-Chairman of the FinTech Association of Hong Kong, Chairperson of the Technology & Innovation Committee at AustCham, an Adjunct Professor at the AIT School of Management, a Conference Ambassador for the Hong Kong Tourism Board, and sits on various Advisory and Steering Committees for HKTDC, HKSTP, and HKGCC. He is a Senior Advisor for a number of leading startups, a Mentor for PingAn's Cloud Accelerator, a Guest Contributor for eFinancialCareers and Regulation Asia, and is recognised as a key FinTech influencer in Asia.

Prior to founding Quinlan & Associates, Benjamin was the Head of Strategy for Deutsche Bank's Equities business in Asia Pacific and its Investment Bank in Greater China. He also worked as a strategy consultant at Oliver Wyman, in Group Strategy and Client Coverage roles at UBS, and as an M&A Tax Consultant at PwC.

Benjamin holds a combined Bachelor of Commerce / Bachelor of Laws (Honours) and a First-Class Honours Degree in Economics (on scholarship) from Macquarie University, Sydney.

YVETTE KWAN
COO & PARTNER

Yvette has over 20 years of experience in corporate strategy and investment banking. Prior to joining Quinlan & Associates, Yvette was the Regional Operating Officer (COO) for UBS AG's Corporate Client Services division in APAC. Before this, she was an Executive Director in UBS's Group Strategy and M&A departments in Zurich, Sydney, and Hong Kong.

Before joining UBS, Yvette worked in the Greater China and Corporate Finance team at Credit Suisse First Boston in Hong Kong. She began her career in Emerging Business Services and Corporate Tax at PwC in Sydney.

Yvette holds an MBA from the Australian Graduate School of Management and a BCom (with merit) from UNSW.

MICHAEL CAMPION
HEAD OF TRAINING & PARTNER

Michael has over 10 years of experience as a professional speaker and emcee, regularly invited to speak in front of audiences of 500+. He has shared the stage with numerous CEOs and celebrities on behalf of blue-chip corporates, schools and not-for-profits. Previously, Michael worked in global banking and markets at Royal Bank of Scotland in Edinburgh.

Michael has extensive media experience, having been interviewed live by BBC World, SCMP, RTHK, and worked on live TV as a sports commentator. He is also a former professional athlete, playing football at international level.

Michael holds a Master degree in Business Management from the University of Edinburgh Business School. He also holds a Bachelor of Arts (Honours) from The University of Durham.

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