6 October 2021
Equity Research
Asia Pacific | Malaysia

CREDIT SUISSE

CTOS Digital

Rare secular growth stock

Business & Professional Services | Initiation

CTOS.KL

Target price (12M, RM)
2.50
Outperform[V]

Price (4 Oct 21, RM)	1.87
Upside/downside (%)	33.7
Mkt cap (RM/US$ mn)	4,114 / 986
Enterprise value (RM mn)	4,122
Number of shares (mn)	2,200
Free float (%)	50.9
52-wk price range (RM)	2.04-1.53
ADTO-6M (US$ mn)	15.1

[V] = Stock Considered Volatile (see Disclosure Appendix)

- **Initiate coverage with OUTPERFORM rating**. We initiate coverage on CTOS Digital (CTOS) with an OUTPERFORM rating and a 12-mth target price (based on discounted cash flow method) of RM2.50/sh, implying a potential 33.7% upside. In our view, the potential catalysts that could re-rate the stock are: (1) confirmation of its pioneer status renewal, (2) synergistic acquisitions at reasonable valuations, (3) favourable data points to strengthen investors' confidence in its growth outlook, (4) speedy restoration of its access to Malaysia's credit bureau data following a recent temporary suspension of access due to concerns over cyber threats.
- **Wide sustainable moat.** CTOS is deemed to be a leading credit rating agency (CRA) in ASEAN, with a leading presence in the Malaysia (71%) and Thailand (59%) markets. The key factors that should enable CTOS to maintain its market dominance are: (1) an extensive database that is difficult to replicate, (2) strong brand and loyal following, (3) strict regulatory requirements, and (4) deeper pockets to build capability.
- **Bright industry prospects driven by secular growth.** Malaysia's credit reporting market size (measured by revenue) is expected to see a 13.2% CAGR over 2021-25 and outpace the ASEAN region's growth of 10.8% p.a. The total addressable market is projected to grow at a much faster pace of 28% p.a. over the same period.
- **Poised for multi-year growth.** We believe CTOS can sustain a 46% p.a. growth in core net profit over 2021-25 driven by rapid growth in revenue of 23% p.a. from key customer segments: key accounts (+12.3% CAGR), commercial (+26.7%), DTC (+51.1%). The key driving factors for this: (1) new products to capture secular growth opportunities, (2) expansion into new verticals, and (3) growth in contribution from newly acquired entities.
- **Key risks.** (1) Regulatory risk that could lead to loss of CRA Certificate, (2) access to data resources, (3) acquisition risk, (4) management risk, (5) data integrity, and (6) CTOS' ability to maintain its pioneer status which has tax implications.

Research Analysts

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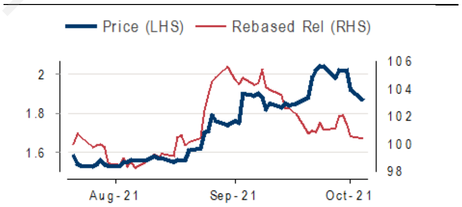
Financial and valuation metrics

Year	12/20A	12/21E	12/22E	12/23E
Revenue (RM mn)	140.5	162.8	206.2	258.7
EBITDA (RM mn)	50.3	68.0	97.8	140.9
EBIT (RM mn)	42.8	61.0	90.5	133.2
Net profit (RM mn)	39.2	63.8	96.1	140.0
EPS (CS adj.) (RM)	0.02	0.03	0.04	0.06
Chg. from prev. EPS (%)	n.a	n.a	n.a	n.a
Consensus EPS (RM)	n.a.	0.02	0.03	0.04
EPS growth (%)	0.5	62.7	50.7	45.7
P/E (x)	105.0	64.5	42.8	29.4
Dividend yield (%)	0.3	1.5	1.4	2.0
EV/EBITDA (x)	84.0	60.2	41.7	28.7
P/B (x)	35.55	13.79	12.22	10.47
ROE (%)	40.3	30.8	30.3	38.4
Net debt/equity (%)	93.2	(7.6)	(8.8)	(18.5)

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance

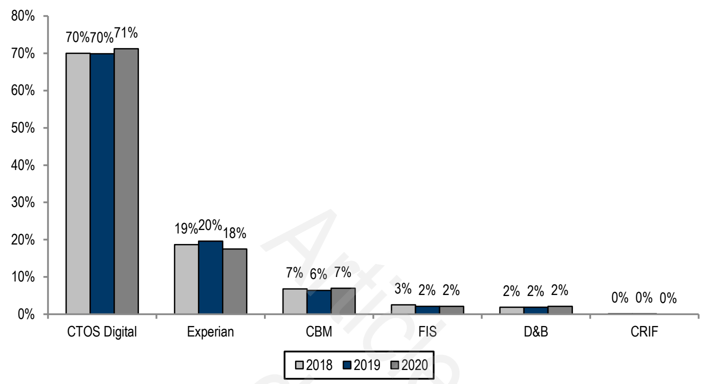


The price relative chart measures performance against the FTSE BURSA MALAYSIA KLCI IDX which closed at 1,522.47 on 04/10/21. On 04/10/21 the spot exchange rate was RM4.17/US$1

Performance	1M	3M	12M
Absolute (%)	(1.6)	-	-
Relative (%)	2.6	-	-

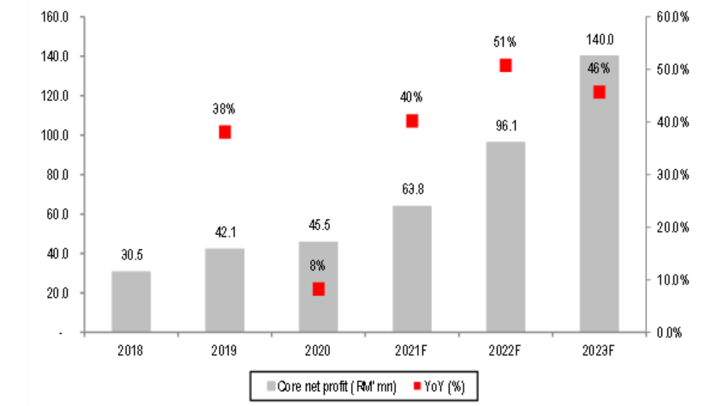
Focus charts

Figure 1: Revenue market share among credit bureaus in Malaysia



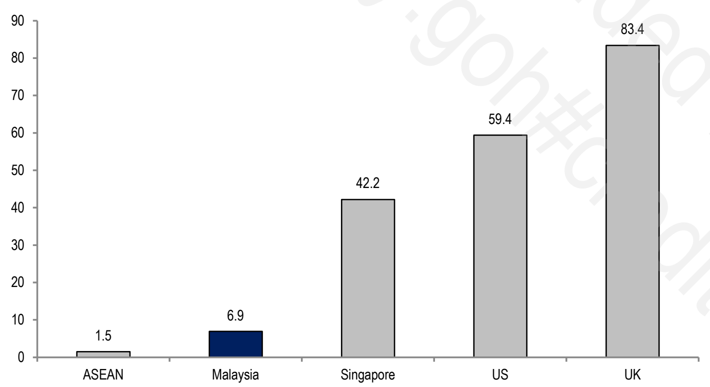
Source: Company data, IDC Malaysia Analysis

Figure 2: Core net profit trend



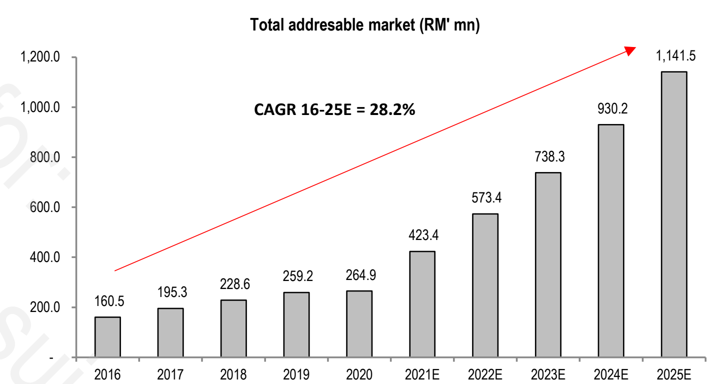
Source: Company data, Credit Suisse estimates

Figure 3: Credit rating revenue per capita (RM)



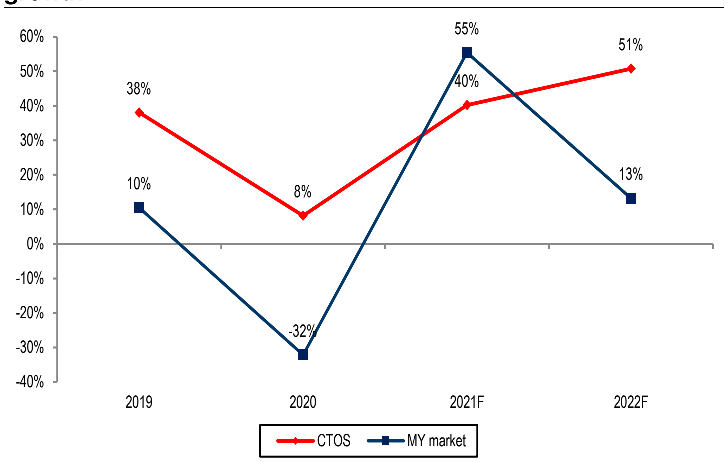
Source: IDC Malaysia Analysis

Figure 4: Sharp growth in the total addressable market in 2021-25E (%)



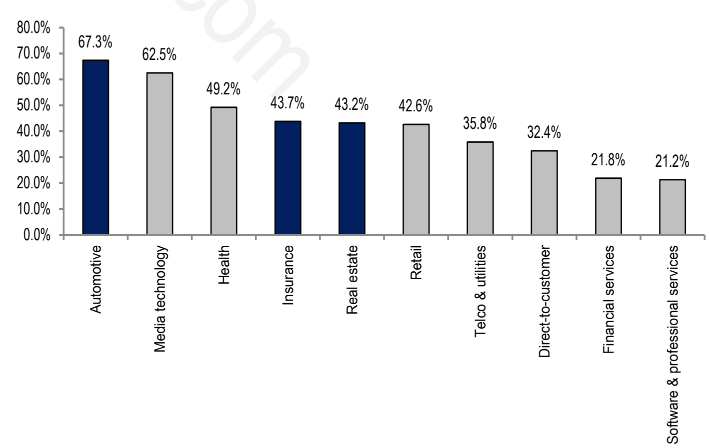
Source: IDC Malaysia Analysis

Figure 5: CTOS' net profit growth vs MY market net profit growth



Source: Company data, Credit Suisse estimates

Figure 6: Projected 2021-25 CAGR growth in total addressable credit reporting market by industry



Source: IDC Malaysia Analysis

CREDIT SUISSE

CTOS Digital (CTOS.KL / CTOS MK)

Analyst: **Danny Goh**

Price (04 Oct 2021): **RM1.87** Target Price: **RM2.50** Rating: **Outperform**

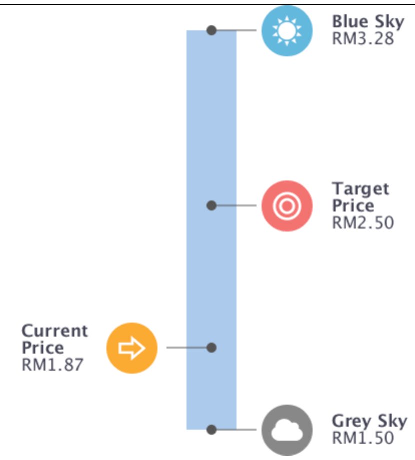
Income Statement (RM mn)	12/20A	12/21E	12/22E	12/23E
Sales revenue	**140**	**163**	**206**	**259**
Cost of goods sold	19	21	29	34
EBITDA	**50**	**68**	**98**	**141**
EBIT	**43**	**61**	**91**	**133**
Net interest expense/(inc.)	4	3	1	0
Recurring PBT	**40**	**67**	**101**	**148**
Profit after tax	**38**	**64**	**96**	**140**
Reported net profit	**39**	**64**	**96**	**140**
Net profit (Credit Suisse)	**39**	**64**	**96**	**140**
Balance Sheet (RM mn)	**12/20A**	**12/21E**	**12/22E**	**12/23E**
Cash & cash equivalents	26	55	78	136
Current receivables	28	25	34	43
Inventories	0	0	0	0
Other current assets	0	0	0	0
Current assets	**55**	**80**	**112**	**179**
Property, plant & equip.	17	21	25	28
Investments	151	192	198	206
Intangibles	50	81	90	92
Other non-current assets	4	1	1	1
Total assets	**276**	**376**	**426**	**506**
Current liabilities	**159**	**67**	**80**	**104**
Total liabilities	**160**	**77**	**89**	**114**
Total debt	134	32	48	64
Shareholders' equity	**116**	**298**	**337**	**393**
Minority interests	0	0	0	0
Total liabilities & equity	**276**	**376**	**426**	**506**
Cash Flow (RM mn)	**12/20A**	**12/21E**	**12/22E**	**12/23E**
EBIT	**43**	**61**	**91**	**133**
Net interest	0	0	0	0
Tax paid	(2)	(3)	(4)	(7)
Working capital	1	2	(13)	(1)
Other cash & non-cash items	8	8	12	15
Operating cash flow	**50**	**68**	**85**	**140**
Capex	(7)	(12)	(13)	(13)
Free cash flow to the firm	**43**	**56**	**73**	**127**
Investing cash flow	**(104)**	**122**	**(21)**	**(13)**
Equity raised	0	0	0	0
Dividends paid	(11)	(61)	(58)	(84)
Financing cash flow	**74**	**(161)**	**(42)**	**(68)**
Total cash flow	**20**	**29**	**23**	**59**
Adjustments	0	0	0	0
Net change in cash	**20**	**29**	**23**	**59**
Per share	**12/20A**	**12/21E**	**12/22E**	**12/23E**
Shares (wtd avg.) (mn)	2,200	2,200	2,200	2,200
EPS (Credit Suisse) (RM)	**0.02**	**0.03**	**0.04**	**0.06**
DPS (RM)	0.00	0.03	0.03	0.04
Operating CFPS (RM)	0.02	0.03	0.04	0.06
Earnings	**12/20A**	**12/21E**	**12/22E**	**12/23E**
Growth (%)				
Sales revenue	8.8	15.9	26.6	25.5
EBIT	2.6	42.7	48.3	47.2
EPS	0.5	62.7	50.7	45.7
Margins (%)				
EBITDA	35.8	41.8	47.5	54.5
EBIT	30.4	37.5	43.9	51.5
Valuation (x)	**12/20A**	**12/21E**	**12/22E**	**12/23E**
P/E	105.0	64.5	42.8	29.4
P/B	35.55	13.79	12.22	10.47
Dividend yield (%)	0.3	1.5	1.4	2.0
EV/sales	30.0	25.1	19.8	15.6
EV/EBITDA	84.0	60.2	41.7	28.7
EV/EBIT	98.7	67.0	45.1	30.3
ROE analysis (%)	**12/20A**	**12/21E**	**12/22E**	**12/23E**
ROE	40.3	30.8	30.3	38.4
ROIC	24.7	23.2	29.4	40.2
Credit ratios	**12/20A**	**12/21E**	**12/22E**	**12/23E**
Net debt/equity (%)	93.2	(7.6)	(8.8)	(18.5)
Net debt/EBITDA (x)	2.15	(0.34)	(0.30)	(0.52)

Source: Company data, Refinitiv, Credit Suisse estimates

Company Background

CTOS Digital is deemed to be the leading credit bureau in ASEAN. CTOS provides credit information and analytics digital solutions on consumers, businesses for use by banks and businesses at each stage of the customer lifecycle.

Blue/Grey Sky Scenario



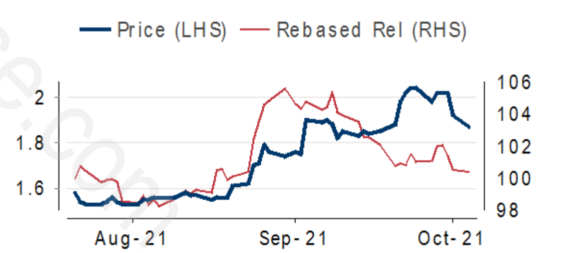
Our Blue Sky Scenario (RM) **3.28**

Our Blue Sky scenario yields a target price of RM3.28. The Blue Sky scenario assumes a higher terminal growth rate of 5%.

Our Grey Sky Scenario (RM) **1.50**

Our Grey Sky scenario yields a target price of RM1.50. The Grey Sky scenario assumes that CTOS' pioneer status is not renewed thus resulting in higher tax rate as well as lower EBITDA assumptions by 20%.

Share price performance



The price relative chart measures performance against the FTSE BURSA MALAYSIA KLCI IDX which closed at 1,522.47 on 04-Oct-2021
On 04-Oct-2021 the spot exchange rate was RM4.17/US$1

Rare secular growth stock

Wide sustainable economic moat

CTOS has leading presence in Malaysia and Thailand with revenue market share of 89% (including Experian) and 59%, respectively.

CTOS is deemed to be a leading CRA in ASEAN, with a leading presence in the Malaysia and Thailand markets. In Malaysia, CTOS is the leading CRA, with a direct 71% share of industry revenue (2020). Its market dominance in Malaysia is further underpinned by its 26% equity stake in Experian, which is the second-largest CRA with a 17.5% share of industry revenue (2020). CTOS also owns a 22.6% stake in a listed company Business Online PCL (BOL) which is the leading provider of business and information and analytics tools, with a 59% market share of revenue (2020). We believe these are some of the key factors that should enable CTOS to maintain its market dominance: (1) an extensive database that is difficult to replicate, (2) strong brand and loyal following, (3) strict regulatory requirements, and (4) deeper pockets to build capability.

Bright industry prospects driven by secular growth

The ASEAN region's credit reporting revenue is expected to grow at CAGR of 10.8% p.a. while Malaysia's credit reporting revenue is projected to rise by 13.2% p.a.

Addressable market poised to grow at 28% pa over 2021-2025

As the leading CRA in Malaysia with exposure to Thailand as well as Vietnam (both through BOL), CTOS is well positioned to capitalise on the promising growth prospects for the ASEAN region's credit reporting industry. The ASEAN region's credit reporting revenue, estimated at RM990.5 mn (US$239 mn), is poised to grow at a CAGR of 10.8% over 2021-25 and outpace more established markets like the UK (5.3% CAGR) and the US (7.5%), according to an industry study by IDC. Malaysia's credit reporting market size (by revenue) is expected to grow by 13.2% CAGR over 2021-25 and outpace the ASEAN region's growth of 10.8% p.a., according to IDC's projections. The projections place Malaysia as the third-fastest growing market among the major ASEAN markets, after Vietnam (+19.3%) and the Philippines (+17.2%). While Malaysia's credit reporting revenue is projected to grow at 13.2% p.a. over 2021-25, the total addressable market is projected to grow at a much faster pace of 28% p.a. over the same period, with a significant 60% YoY jump anticipated in 2021.

Poised for multi-year growth

We estimate that CTOS can sustain a 46% p.a. core net profit growth over the next five years driven by rapid revenue growth of key customer segments: key accounts (+12%), commercial (+27%) and DTC (+51%)

We believe CTOS can potentially sustain a 46% p.a. growth in core net profit over the next five years, driven by rapid growth in revenue (23% five-year CAGR) from key customer segments: key accounts (+12.3% CAGR), commercial (+26.7%), DTC (+51.1%). There is huge upside potential to grow its customer base as: (1) the commercial customer base of 17k SMEs is only a fraction of the customer size of 100k and (2) the consumer subscriber base of 1.4 mn is only a small portion of its database of 15 mn consumer credit data. We believe our projected growth is achievable, given: (1) new products to capture secular growth opportunities, (2) expansion into new verticals, and (3) growth in contribution from newly-acquired entities.

Initiate coverage with OUTPERFORM

Target price of RM2.50/sh based on DCF valuation

We initiate coverage on CTOS with an OUTPERFORM rating and a 12-month TP (based on DCF method) of RM2.50/sh. The stock trades on 2022E P/E of 46x and 2023E P/E of 32x. While CTOS is trading at a premium to global peers' average 2022E P/E of 30x, we believe the valuation premium can be justified by its superior net profit growth potential (estimate two-year CAGR of 48% vs peer average of 10% p.a.) and stronger balance sheet (net cash post-IPO vs average net gearing ratio of 1x for comparable peers). CTOS' P/E-to-growth multiple of 1.5x compares favourably to peer average of 3.0x. In our view, potential catalysts that can re-rate the stock are: (1) confirmation of the renewal of its pioneer status; (2) synergistic acquisitions that can add operational value through creation of new product lines and cross-fertilisation of client base; and (3) favourable data points to strengthen investors' confidence in its ability to rapidly grow its client base.

Key risks

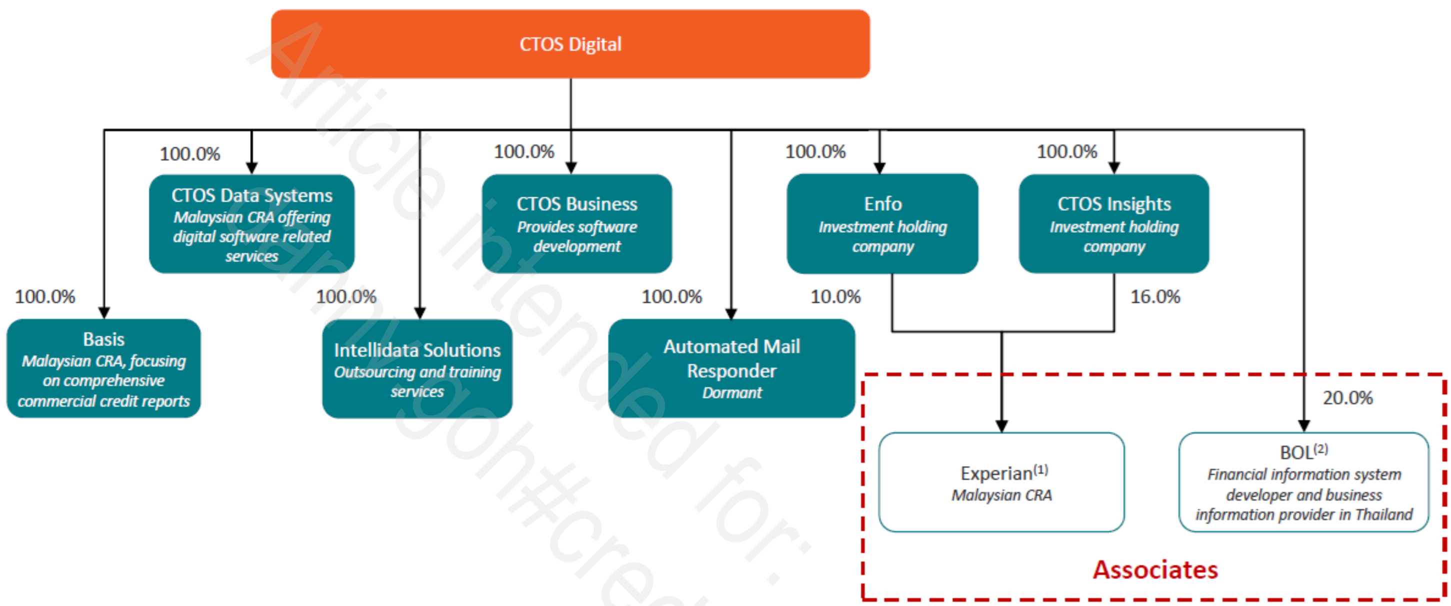
Main risks revolve around CTOS' CRA Certificate, data sources, acquisition risk, renewal of pioneer status

Key risks include: (1) regulatory risk, (2) access to data resources, (3) acquisition risk, (4) management risk, (5) data integrity, and (6) CTOS' ability to maintain its pioneer status.

Wide sustainable economic moat

CTOS is deemed to be a leading credit bureau in ASEAN, with a leading position in the Malaysia and Thailand markets. In Malaysia, CTOS is the leading CRA, with a direct 71% share of industry revenue (2020). Its market dominance in Malaysia is further underpinned by its 26% equity stake in Experian, which is the second-largest CRA, with a 17.5% share of industry revenue (2020). CTOS also owns a 22.6% stake in a listed company BOL which is the leading provider of business and information and analytics tools with a 59% market share of revenue (2020).

Figure 7: CTOS corporate structure



Source: Company data. Notes: (1) As at 2 April 2021, the remaining shareholder of Experian is Experian (Malaysia) Sdn Bhd (74.0%); (2) As at 25 February 2021, the remaining shareholders of BOL are Advanced Research Group Co. Ltd. (16.42%), Min Intanate (10.88%), Dun & Bradstreet International, Ltd (8.68%), Visnu Skulpichetrat (7.50%), Bangkok Bank Public Company Limited (4.00%), Pan Pacific Consultant Co, Ltd (3.72%), Parinya Khancharoensuk (2.68%), UBS AG London Branch (2.26%), Harkishin Tanwani (2.19%) and other shareholders holding less than 2.19% each (21.67%).

Evergreen business with resilient qualities

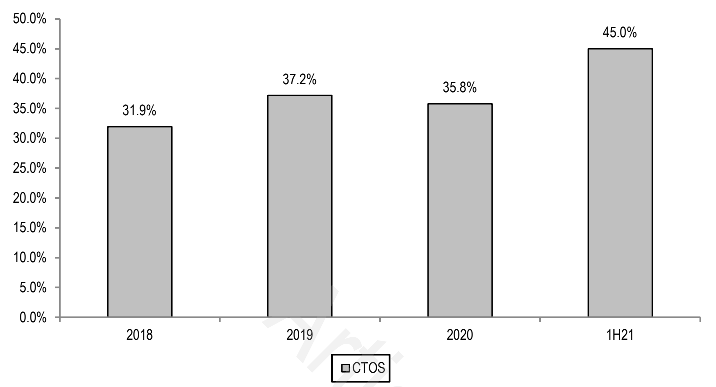
CTOS provides credit information and analytics digital solutions on consumers, businesses and companies for use by banks as well as businesses at each stage of the customer lifecycle and credit information and analysis to consumers. As demand for its services remained buoyant even during the pandemic period, CTOS has been able to register healthy growth in revenue (2020 +8.8% YoY, 1H2021 +17.2% YoY) and core profitability (normalised net profit—2020 +8.2% YoY, 1H2021 +69.9% YoY) as well as increase its number of subscribers (+17% CAGR from end-2018 to end-2020) in spite of the challenging economic backdrop.

2Q21 results

Here's a quick recap of CTOS' latest 2Q21 results that demonstrate the resilience of CTOS' profitability and is testament of the secular growth attributes of its business.

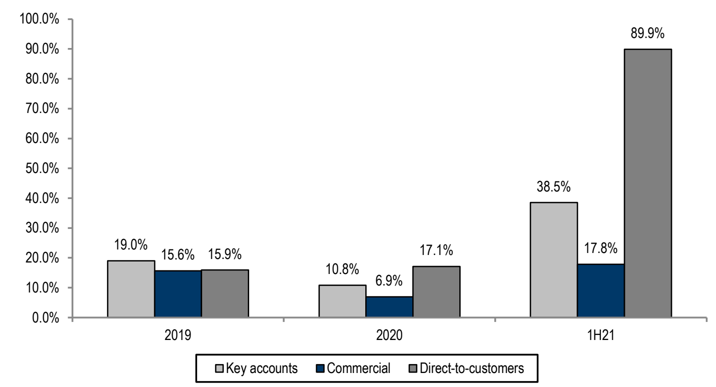
- Core net profit for 1H21 grew 69.9% YoY to RM31.4 mn (vs RM18.5 mn in 1H20) on the back of revenue growth of 17.1% YoY. Revenue growth for the three key customer segments in 1H21 as follows: Key accounts +7.5% YoY (+38.5% YoY on normalised base after adjusting for impact of CCRIS fee waiver), commercial +17.8% YoY, direct-to-customer +89.9% YoY.

Figure 8: EBITDA margin 2018-1H21



Source: Company data, Credit Suisse

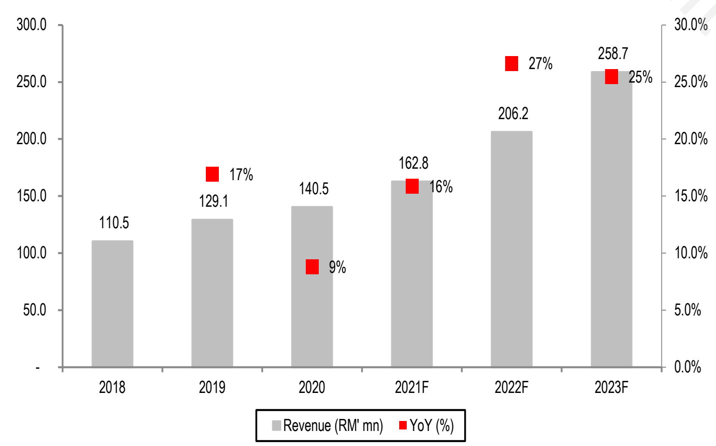
Figure 9: Normalised revenue growth of key customer segments



Source: Company data, Credit Suisse

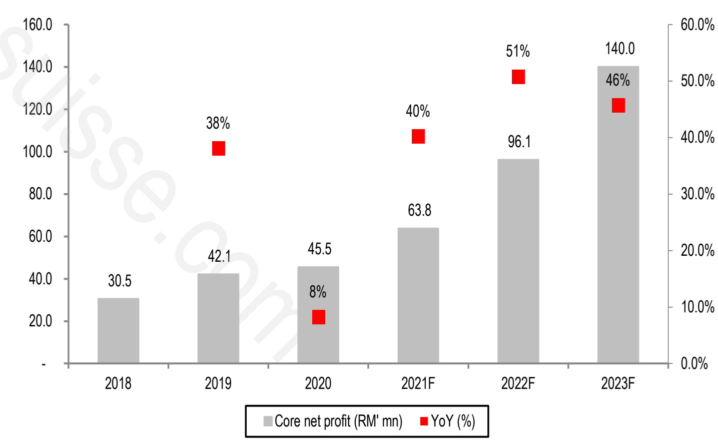
- Reported net profit grew at a slower pace of 25% YoY to RM19.5 mn in 1H21 due to a higher tax rate of 20% compared to 7% a year ago, as management provided for a higher regular tax while awaiting final confirmation of the renewal of its pioneer status for another five years (2021-26). Management seems confident that CTOS will be able to renew its pioneer status as the group has fulfilled all necessary qualifying criteria and expects to receive formal confirmation from the Malaysia Digital Economy Corporation (MDEC). By mid to end-Oct-2021. Upon the formal renewal of its pioneer status, CTOS will reverse the earlier taxes provided.
- Gross profit margin expanded to 88% in 1H21 (vs 85% in 1H20), while EBITDA margin widened to 45% (from 33%).
- CTOS declared an interim dividend of 0.53sen/sh that translates to a 60% payout ratio.

Figure 10: Revenue trend



Source: Company data, Credit Suisse estimates

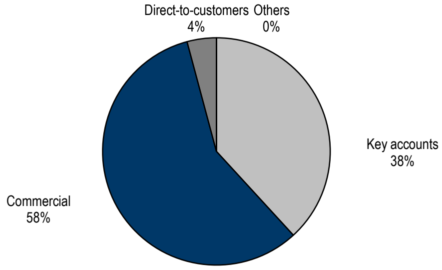
Figure 11: Core net profit trend



Source: Company data, Credit Suisse estimates

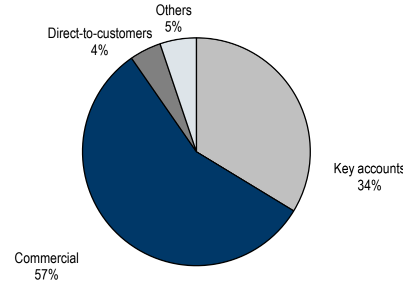
CTOS serves three main customer types, namely key accounts, commercial and direct-to-customers. A brief description of each of these customer segments is given below.

Figure 12: Revenue breakdown by customers (2019)



Source: Company data

Figure 13: Revenue breakdown by customers (2020)



Source: Company data, Credit Suisse

Key accounts

Here are the key attributes of this customer segment:

- **Main customers:** Key accounts segment comprises ~430 subscribers/customers. The customers primarily include banks, telecommunication companies, insurance companies, fintechs (e.g., P2P lenders, e-commerce platforms) and other business organisations. CTOS has 100% customer retention since 2017. Going forward, management sees potential to add more key accounts particularly from companies involved in the real estate, automotive and insurance businesses where there is plenty of scope for increased usage of its services.

- **Service and products offered:** Digital solutions used by key account customers include CTOS Scores, CAD, CTOS eKYC, Comprehensive Portfolio Review, CTOS Portfolio Analytics and Insights, and CTOS IDGuard. Digital solutions are typically customised to meet specific requirements and integrated into their technology platforms. Contracts are generally for a fixed term ranging from one to three years. Revenue is also derived from various license, set-up and maintenance fees for the digital solutions.

- **Revenue contribution:** Revenue contribution to CTOS from key accounts made up 33.7% of total revenue in 2020 (2019 38.2%, 2018 37.5%). According to management, 75% of key account revenue is recurring. CTOS has long working relationships with the Top 5 key accounts ranging from 12 to 19 years. The Top 5 accounts contributed 14.2% (2019 15.7%, 2018 16.8%) of the total group revenue and 42% (2019 41%, 2018 45%) of the total revenue from key accounts in 2020. Over 2018-20, revenue for the key account segment saw a CAGR of 6.9%. Having registered a 19.0% YoY revenue growth in 2019, revenue declined 4.0% YoY in 2020 despite increased sales volume from newly introduced digital solution products (e.g., bundled services that were introduced in 4Q 2019), as the group had to reduce fees by RM7.3 mn given that Bank Negara allowed free access to its CCRIS (Credit Bureau) database from mid-2020 onwards to ease the financial burden faced by businesses. BNM's free access to CCRIS is expected to persist until end-2021, and hence CTOS is expected to suffer a full-year impact of lowering its fees this year.

Commercial

Key points to highlight on commercial customer segment:

- **Main customers:** All commercial customers other than key accounts customers and all of BASIS' customers fall into this category. SMEs form the bulk of customers in the commercial segment. According to central bank's definition, a company is deemed to be an SME if it has: (1) annual sales turnover of less than RM50.0 mn or fewer than 200 full-time employees for manufacturing companies, (2) annual sales turnover of less than

RM50.0 mn or fewer than 75 full-time employees for companies in services and other sectors. The majority of BASIS' customers are located internationally across Asia Pacific and Europe. Commercial customers span nearly every industry, including automotive dealers, legal services and non-bank financial service providers such as fintech companies and e-commerce platforms. CTOS (excluding BASIS) currently has some 17,000 commercial customers. Its commercial customer base has been seeing a healthy 14.4% CAGR over 2018-20. There are 907k SMEs in Malaysia and management has identified an addressable market of 100k SMEs as target customers. While it has been challenging to onboard new commercial customers during the lockdown periods, management expects a major pick-up in customer acquisition as lockdown measures ease in 4Q21.

- **Services and products offered:** Commercial customers primarily pay subscription fees for access to CTOS' digital platforms, CTOS Credit Manager and CTOS Basis (formerly BASISNET, reports on international companies), and to utilise customer management modules. CTOS also generates revenue from sales of additional digital solutions and services that are purchased by customers. To better service customers' needs, CTOS provides easy-to-use, ready off the shelf and effective credit insights as well as risk management tools to help businesses make credit or trade decisions, facilitating broad access and affordable credit for both business-to-business and business-to-consumers.
- **Revenue contribution:** Commercial customers generated the largest portion of the group's revenue in 2020 that accounted for 56.7% of total revenue (2019 = 57.6%, 2018 = 58.3%). SME customers accounted for 92.4% of the commercial segment's revenue in 2020 (vs 91.4% in 2019 and 90% in 2018). Revenue derived from commercial customers grew at a CAGR of 11.2% p.a. over 2018. Revenue grew 15.6% YoY in 2019 and continued to grow at a moderate pace of 6.9% YoY in 2020 despite economic headwinds during the pandemic period. Revenue increase in 2020 was primarily due to strong growth in new CTOS Credit Manager subscribers and firmer demand for CTOS Data Systems Reports.

Direct-to-customers (DTC)

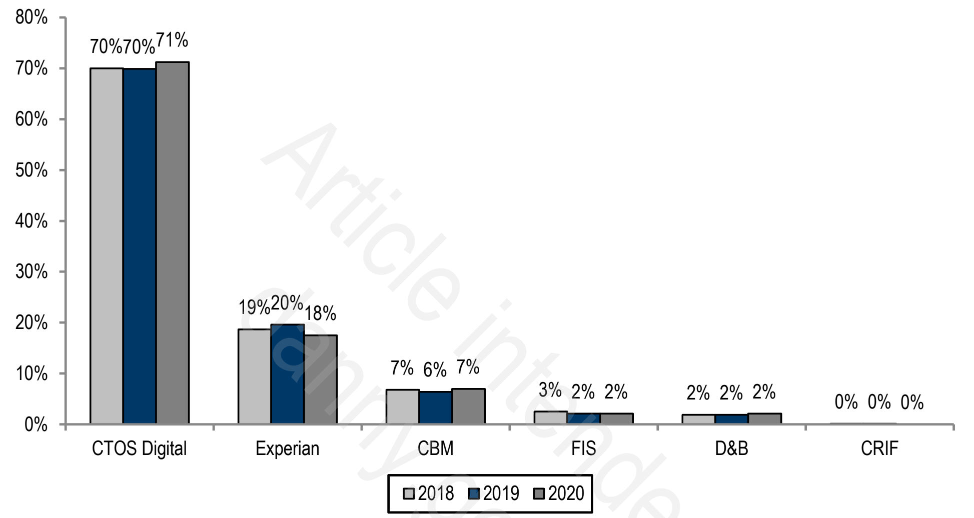
Here are the key attributes of this customer segment:

- **Main customers.** DTC customers are Malaysian consumers. Currently CTOS has 1.3 mn registered users for CTOS ID, which is CTOS Data Systems' entry-point consumer offering that provides consumers with access to basic information about their credit. A noteworthy trend is that its DTC customer base has been growing at a rapid pace of 37% p.a. CAGR over 2018-20. Given that CTOS has a database of 15 mn consumers, there is still plenty of scope to increase its DTC subscriber base.
- **Services and products offered.** The revenue generated from DTC customers comes primarily from the sale of credit scoring reports (MyCTOS Score Reports) through the online channel and authorised reseller agents. Consumers who purchase MyCTOS Score Reports receive their CTOS Consumer Score and other information regarding their credit history and financial health, such as CCRIS information, directorship and business interests, litigation cases and trade reference information. DTC digital solutions are designed to promote financial literacy and credit awareness by helping Malaysians understand their own creditworthiness and educating them on the value of maintaining good credit health, leading to greater access to credit. Another service offered to DTC customers is CTOS SecureID, a consumer fraud protection and credit monitoring solution with dark web monitoring. This product alerts a consumer if his/her personal information is available on the dark web.
- **Revenue contribution.** Revenue from DTC customers accounted for 4.5% of total revenue in 2020 (2019 = 4.2%, 2018 = 4.2%). In 2020, DTC revenue growth accelerated to 17.1% YoY (vs 15.9% YoY growth in 2019), a reflection of the huge upside potential for this customer segment.

Unassailable lead in Malaysia

CTOS' dominance is underscored by its effective claim over 89% of the CRA industry revenue (through 71.2% direct market share and another 17.5% through Experian, its 26% associate). In our opinion, CTOS is capable of defending its leading market position and could potentially even increase its lead over competitors.

Figure 14: Revenue market share among credit bureaus in Malaysia



Source: Company data, IDC Malaysia Analysis

We outline below some key reasons supporting this view.

High barriers to entry

There appears to be a high barrier to entry in the Malaysian CRA industry and this is apparent given that there has only been one new entrant over the past ten years. In our opinion, these are some of the key factors that should enable CTOS to maintain its market dominance.

- **Extensive database that is difficult to replicate.** CTOS' access to an extensive database through 30 years of data collection affords the group a huge competitive advantage over its peers. CTOS currently has a database of 15 mn consumers and 8 mn businesses. Basically its consumer database is equivalent to the size of the entire working population of 15.1 mn individuals in Malaysia. CTOS is also among the three private CRAs that have been granted approval to Bank Negara's Central Credit Reference Information System (CCRIS), which stores all information on financial and repayment history of borrowers. With access to a sizeable database, CTOS can then build the algorithm and analytics necessary for modelling credit scores. Competitors with limited access to data and that lack historical information on consumers and businesses would find it challenging to pose a threat to CTOS. CTOS has developed its proprietary databases eTR, eTR plus and CED. eTR contains non-bank negative payment histories of Malaysian consumers and businesses. eTR plus adds value to the eTR database by providing a more balanced understanding of a consumer's credit worthiness and ability to borrow responsibly. CED is a database of litigation and bankruptcy proceedings shared by subscribers. These proprietary products provide CTOS with a major competitive edge and would be extremely difficult to replicate.

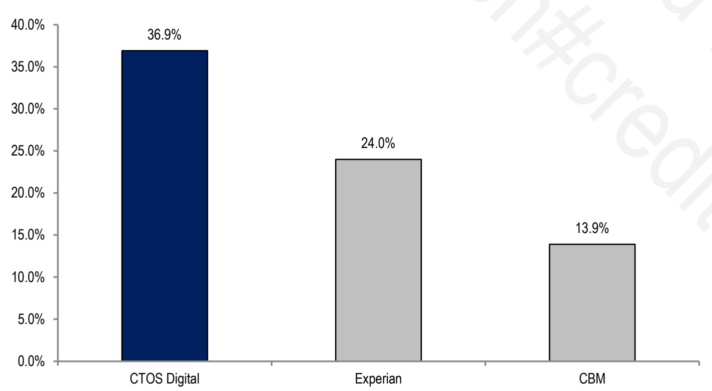
- **Strong brand and loyal following.** Given the sensitivity of customer information gathered, customer trust and brand recognition are important. New entrants would need to compete against established CRAs such as CTOS that have developed a strong following among customers. The high 75% recurring revenue from key accounts and 100% key account customer retention over the past three years is a testament of the stickiness of its key clients. CTOS has built a reputation for having one of the largest electronic trade reference databases in the country, making the barriers to entry significantly high for new entrants.

- **Strict regulatory requirements.** CRAs are regulated by the Registrar Office of Credit Reporting Agencies and bound by the CRA Act. To establish a new CRA, foreign shareholding is subject to a ceiling of 70.0% and those with more than 51.0% foreign shareholding are only allowed to operate a commercial credit reporting business. It is also mandatory for the CEO and two-thirds of its board members to be Malaysian citizens. Capital requirements are not high at a minimum paid-up capital of RM1.0 mn unimpaired losses. It is also compulsory for CRAs to ensure that credit information is accurate, up-to-date, complete, relevant and not misleading. Being an industry that is highly regulated, it makes it difficult for new CRAs to enter the market.

- **Data protection.** Given that CRAs handle, process and analyse customers' highly confidential information, it is imperative for CRAs to put in place cybersecurity tools to avoid loss, misuse, modification, unauthorised or accidental access is imperative. Proper training is also required to educate and train employees on their social responsibility and business ethics to maintain cyber hygiene and prevent data breaches. Combined with the security requirement of the CRA Act this creates a high barrier to entry for new CRAs.

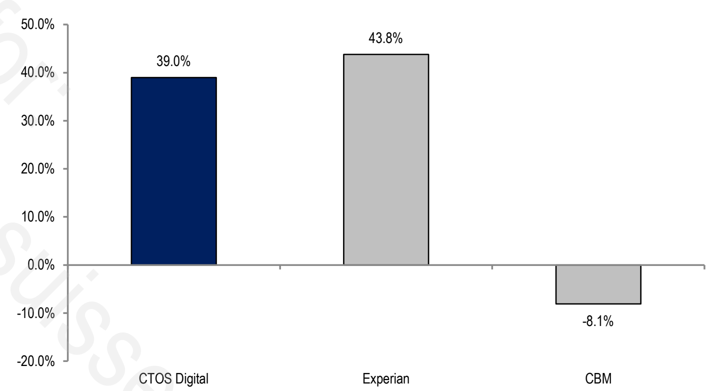
- **Deeper pockets to build capability.** As the market leader, CTOS is in a better position to further strengthen its capabilities and widen its product offering given its superior profitability compared to peers. Given its economies of scale and wider range of service offerings to value-add for customers, CTOS enjoys a much higher profit margin than its competitors. Based on latest financial accounts, CTOS' EBITDA margin of 36.9% in 2020 compared to Experian's (second-largest market share) 24% and Credit Bureau Malaysia's (third-largest player) 13.9%.

Figure 15: EBITDA margin (Based on 2020 data)



Source: Company data

Figure 16: ROE comparison



Source: Company data

One-stop shop catering for entire customer life-cycle

Among the seven licensed CRAs in Malaysia, CTOS has the most complete range of products (please refer to the figure below) that caters for the end-to-end needs throughout the entire customer lifecycle. CTOS' product offering is comparable with CRAs from developed markets such as Experian Plc, Transunion LLC, Equifax LLC. None of its competitors currently offer digital solutions that assist customers with: (1) fraud prevention and monitoring, (2) credit comparison, (3) identity theft protection, and (4) tenant screening. CTOS' ability to offer differentiated value-added digital solutions has enabled the group to reinforce its competitive advantage over its peers. Armed with a leading market share of a highly cash generative business, CTOS intends to further invest in IT capabilities, data analytics and artificial intelligence (AI) to broaden its product offering and further consolidate its market share.

Figure 17: Solutions throughout the lifecycle stage

Lifecycle Stage	Identification	Customer/ vendor onboarding	Application and decisioning	Management and monitoring	Recovery
Description	Customer identifies a prospective business or new business relationship or transaction	Initial step of determining whether a prospective customer or vendor is suitable based on their past business and financial dealings	Business decides whether or not to extend credit after a prospective customer is on-boarded	Effective portfolio management, analysis and monitoring to better identify new sources of revenue and potential areas of credit risk	A business must manage its relationship with a customer that can no longer meet its credit obligations
Malaysia Digital Solutions	• CTOS CreditFinder • CTOS Tenant Screening Report • Company Search • Business Listings • Customised Bulk Data Sales	• CAD • CTOS Credit Manager • CTOS IDGuard • CTOS eKYC • CTOS Tenant Screening Report	• CAD • CTOS Credit Manager • CTOS Scores • CTOS Data Systems Reports, CTOS Basis Reports and External Reports • CTOS Basis (formerly known as BASISNET) • eTR • eTR Plus	• CTOS Credit Manager • CTOS IDGuard • CTOS Scores • Comprehensive Portfolio Review • CTOS Portfolio Analytics and Insights • CTOS SecureID	• CTOS Credit Manager • eTR • eTR Plus

Source: Company data

Figure 18: CTOS Digital has a more diverse product range compared to peers

	Services Provided	ctos*	CREDIT BUREAU MALAYSIA	experian	CRIF	dun & bradstreet	FIS Data Reference
Core Credit Services	Access to CCRIS	♦	♦	♦			
	Credit Scoring	♦	♦	♦			
	Credit Rating	♦	♦	♦	♦	♦	
	Consumer Credit Report	♦	♦	♦			♦
	Commercial Credit Report	♦	♦	♦	♦	♦	♦
	-Business Information Report	♦	♦	♦	♦	♦	♦
	-Credit Monitoring Service	♦	♦	♦			
	-International Reports	♦		♦	♦	♦	
Key Value-Added Services	Business Analytics	♦	♦	♦	♦	♦	
	Fraud Prevention	♦					
	Fraud Monitoring	♦		♦			
	Scoring/Rating Validation Services	♦	♦	♦			
	Credit Decisioning & Analytics	♦		♦	♦		
	Digital Onboarding (eKYC)	♦		♦	♦		
	Credit Risk Management	♦		♦		♦	
	Credit Comparison Site	♦		♦			
	Identity Theft Protection	♦		♦			
	Tenant Screening	♦					

*Note:*Includes solutions and services offered by both entities under the holding company which are CTOS Data Systems and Basis.*

Source: Company data

Stronghold on the Thailand market

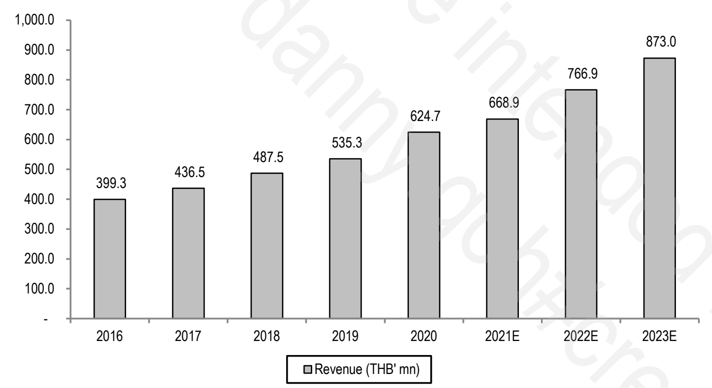
Through its 22.6% listed associate BOL, the group has a leading share of the CRA market in Thailand. CTOS acquired a 20% stake in BOL for a cash consideration of Bt689 mn (RM92 mn) in Oct-2020 and incurred another Bt208.7 mn (RM26.8 mn) to further raise its stake to 22.6% in Aug-2021. The stock price of BOL has since more than doubled.

Key attributes that underscore the dominance of BOL:

- **Early-mover advantage.** BOL has an early mover advantage given it started over 20 years ago when had it signed an MOU (Memorandum of Understanding) with the Ministry of Commerce to provide online information of registered companies in Thailand. BOL then subsequently entered into a joint venture with Dun and Bradstreet (D+B) in 1998. Today D+B is also among the major shareholders of BOL with a 9% direct equity stake.
- **Built up a sizeable database.** BOL has an extensive database comprising 1.5 mn Thai companies and 350 mn international companies. BOL also has a 12.5 % stake in the National Credit Bureau of Thailand (NCB). Other major shareholders of the NCB are Transunion (12.5% stake) and the rest is owned by Thai banks. BOL has access to data on businesses, while Transunion has access to the consumer data. Management is looking into the possibility of linking up both their own data on businesses with Transunion's consumer data.
- **Leading market share.** As at 2020, an Independent Market Research Report on the Credit Reporting industry issued by IDC Market Research (M) Sdn Bhd estimates that BOL's market share for Thailand stood at 59.0% of industry revenue. BOL derives its revenue mainly from: (1) information services, (2) risk consultation, and (3) other services (includes special projects and debt collection). Revenue derived from information services accounted for 62% of the total revenue in 2020 (vs 71% in 2019). Three key products contribute to information services revenue: Enlite (45% of total), Corpus (35%), and D+B (20%). Enlite is a product that caters for the decision support process of banks. Corpus integrates information on companies' profile, shareholder information, director details and financial information. D+B taps into the database of its international JV partner D+B and primarily caters for the credit screening and background checks for offshore trading partners. Risk consultation was the second-largest revenue contributor and accounted for 22% of total revenue in 2020 (vs 11% in 2019). Risk consultation revenue is mainly derived from risk management tools for banks and the demand for its services picked up during the pandemic period as banks needed to conduct more credit risk screening for restructured loans arising from the forbearance measures offered to borrowers adversely impacted by COVID-19. Management expects risk consultation revenue to remain robust in 2021, as banks continue to restructure loans. The rest of BOL's revenue is derived from other services (11% of revenue in 2020 and 12% in 2019) such as special projects to satisfy customers' unique requirements and debt collection service. Management aims to add an additional new revenue stream from its latest product known as Matchlink, which is an electronic business matching platform to facilitate connection between buyers, suppliers and sources of funding. The database can be used to support business decision making, reduce operational process, mitigate risk and increase opportunities.
- **Robust profit growth in spite of economic headwinds.** Over 2018-20, BOL's revenue saw a 13% CAGR, while net profit surged 31% p.a. For 1H 2021, BOL continued to register strong growth, with reported net profit up 32% YoY to Bt120 mn, while revenue grew 5% YoY. BOL has been consistently maintaining a high dividend payout ratio at the 77-95% range in the past five years and management aims to maintain at least a 50% payout going forward.

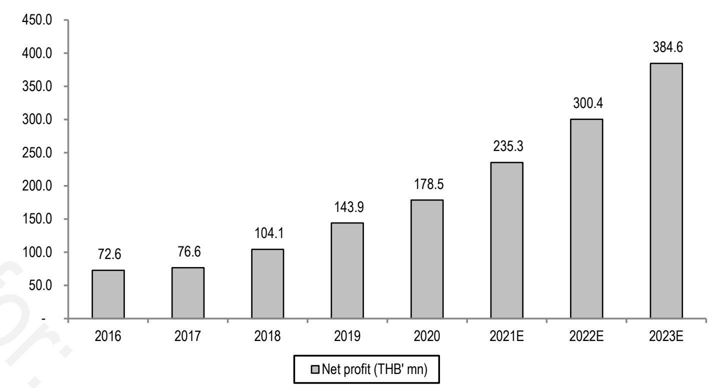
- **CS' projects net profit could more than double over 2020-23.** CS has initiated coverage on BOL with an OUTPERFORM rating and a DCF-derived target price of Bt15.40 (compared to the CTOS' average cost of Bt4.83). We are projecting a 14.2% revenue CAGR for BOL over 2021-23, driven mainly by the information services segment (23.8% revenue CAGR for 2021-23E) as it strives to increase customer penetration rate as well as drive revenue share with the introduction of new features. Apart from an expected strong revenue growth going forward, BOL has a strong operating leverage and we project a 27.9% net profit CAGR over 2021-23 on the back of anticipated net profit margin expansion from 28.6% in 2020 to 44.1% in 2023. Key drivers of revenue growth: (1) Enlite is slated to have an upgrade in capabilities which would result in price increase in 2022; (2) Corpus product is severely underpenetrated and only commands 5% share of BOL's targeted market and we are expecting customer acquisition to accelerate as Covid-19 stabilises; and (3) MatchLink to garner interest from the large MSME sector and it is easily adaptable across ASEAN. Other potential growth areas include a collaboration/technology sharing with CTOS Digital as well as its new venture into Vietnam.

Figure 19: BOL's revenue trend (Bt mn)



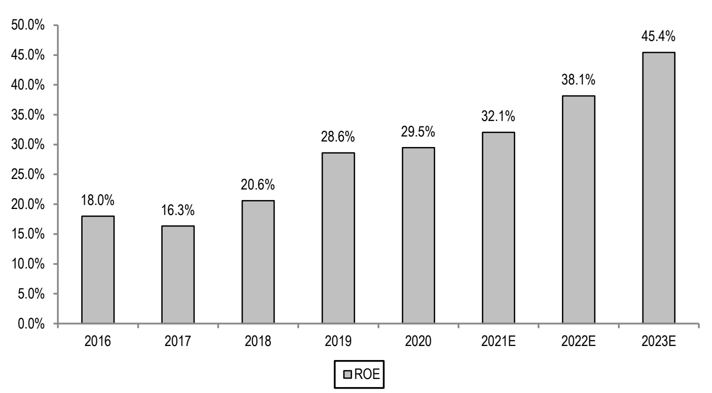
Source: Company data, Credit Suisse estimates

Figure 20: BOL's net profit trend (Bt mn)



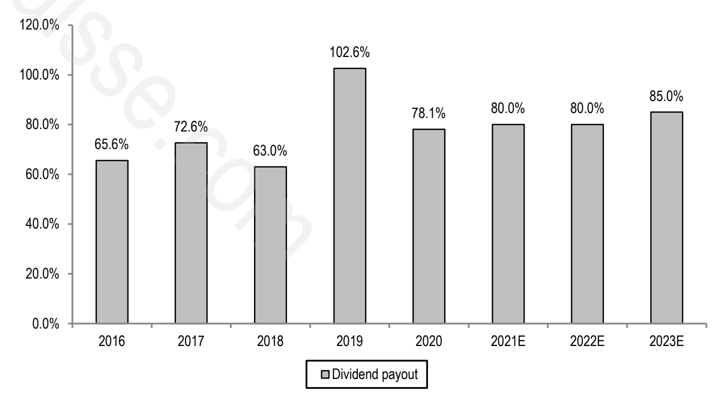
Source: Company data, Credit Suisse estimates

Figure 21: BOL's ROE trend



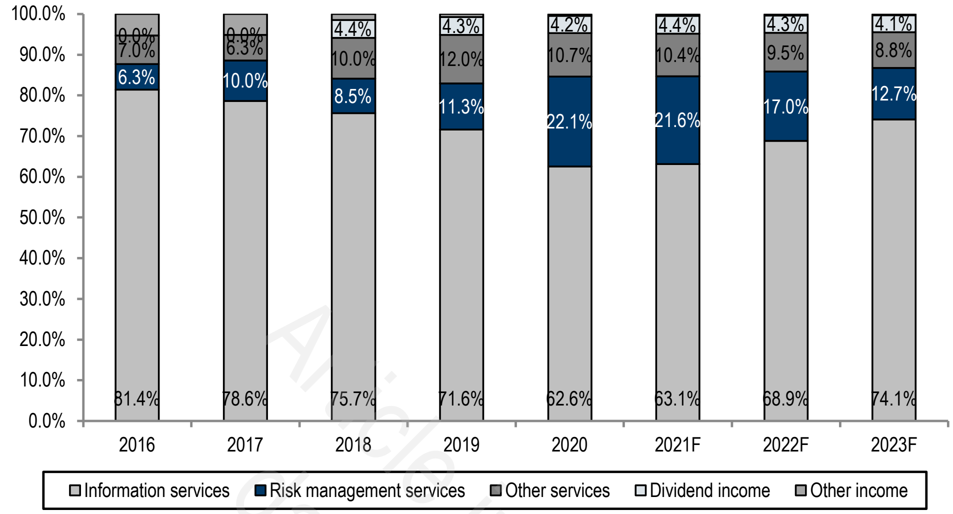
Source: Company data, Credit Suisse estimates

Figure 22: BOL's dividend payout ratio



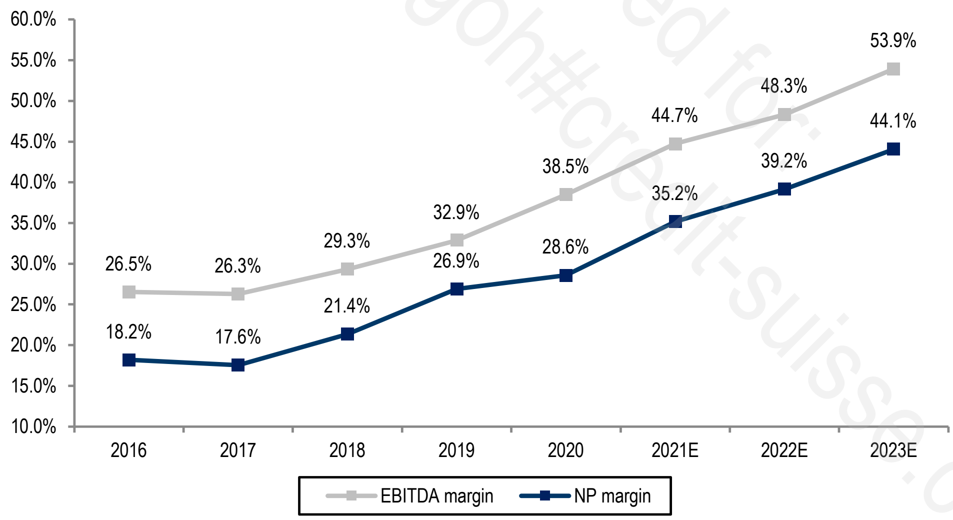
Source: Company data, Credit Suisse estimates

Figure 23: Revenue mix of BOL



Source: Company data, Credit Suisse estimates

Figure 24: EBITDA and net profit margin of BOL



Source: Company data, Credit Suisse estimates

Venture into Vietnam could add new profit stream

In Sep-2019, BOL ventured into Vietnam and set up a 50-50 joint venture with CRIF S.p.A. BOL is still in the process of starting the business in Vietnam and recently completed the data matching and infrastructure. BOL procures data from its partner and the data ultimately comes from the Ministry of Planning Investments. Management acknowledges that the market is more fragmented than its home market and hence will deploy a different strategy from the approach in Thailand. BOL intends to focus initially on offering Enlite and Matchlink products to the Vietnam customer base. The Vietnam credit reporting market is underdeveloped compared to Malaysia and Thailand as only 40% of its population is covered by a credit bureau (Malaysia = 77%, Thailand = 56.5%).

Bright industry prospects driven by secular growth

As the leading CRA in Malaysia with exposure to Thailand as well as Vietnam (both through 22.6% associate BOL), CTOS is well positioned to capitalise on the promising growth prospects for the ASEAN region's credit reporting industry.

Superior growth potential for ASEAN region

The ASEAN region's credit reporting revenue, estimated at RM990.5 mn (US$239 mn), is poised to see a CAGR of 10.8% over 2021-25 and outpace more established markets like the UK (CAGR of 5.3% p.a.) and the US (7.5% p.a.), according to an industry study by IDC. The robust growth projected for ASEAN can be attributed to factors given below.

Low penetration and underserved

Compared with more developed markets such as the UK and the US, credit reporting revenue per capita is significantly lower for the ASEAN region. On average, ASEAN's credit reporting revenue per capita in 2020 averaged RM1.48 compared to RM83.4 in the US and RM59.4 in the UK (Figure 30). Coverage of population by credit bureaus averaging 46% is also much lower in the ASEAN region (please refer to chart below) compared to 100% in the UK and the US, which is to a large extent a reflection of the comparatively lower credit penetration in the region.

Figure 25: ASEAN credit reporting industry market size 2016-25E (RM mn)

	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E	CAGR 16-20	CAGR 21E-25E	CAGR 16-25E
Indonesia	114.9	148.2	183.8	213.2	218.8	230.5	252.8	280.7	305.9	331.6	17.5%	9.5%	12.5%
Malaysia	138.5	169.5	196.9	215.6	224.7	246.6	283.1	320.9	362.6	405.6	12.9%	13.2%	12.7%
Philippines	26.3	35.0	45.8	58.3	62.3	69.9	83.5	100.0	115.5	131.9	24.0%	17.2%	19.6%
Singapore	181.3	197.9	213.7	228.3	240.5	257.1	270.9	285.3	300.4	314.0	7.3%	5.1%	6.3%
Thailand	103.8	113.9	123.6	132.9	139.1	145.6	154.6	165.1	175.3	188.2	7.6%	6.6%	6.8%
Vietnam	24.6	31.7	40.4	50.7	58.0	68.0	78.4	93.4	110.7	137.5	24.0%	19.3%	21.1%
Others	23.1	27.4	29.0	33.7	47.1	53.3	61.2	73.3	88.6	105.1	19.5%	18.5%	18.3%
ASEAN	**612.5**	**723.6**	**833.2**	**932.6**	**990.5**	**1,070.9**	**1,184.5**	**1,318.7**	**1,458.9**	**1,613.9**	**12.8%**	**10.8%**	**11.4%**

Source: IDC Malaysia Analysis

Figure 26: Comparison of indicators in key geographies

	Malaysia	Singapore	Indonesia	Thailand	Philippines	Vietnam	UK	US
GDP per capita, 2020 (RM)	44,054.4	252,779.7	17,454.8	31,515.0	14,576.7	15,116.9	169,553.7	272,521.0
GDP per capita CAGR, 2021-25E	4.9%	3.3%	6.1%	5.4%	7.5%	8.5%	3.6%	3.7%
Population, 2020 (mn)	32.7	5.7	270.2	69.8	109.6	97.3	67.9	331.0
Credit reporting industry market size, 2020 (RM mn)	224.8	240.5	218.8	139.1	62.3	58.0	3,954.2	27,887.0
Credit reporting industry CAGR, 2021-25E	13.2%	5.1%	9.5%	6.6%	17.2%	19.2%	5.3%	7.5%
Population covered by a Credit Bureau, 2019	77.0%	64.2%	35.7%	56.5%	13.5%	40.0%	100.0%	100.0%
Credit reporting revenue per capita 2019 (RM)	6.8	42.2	0.8	2.0	0.5	0.6	58.3	84.3

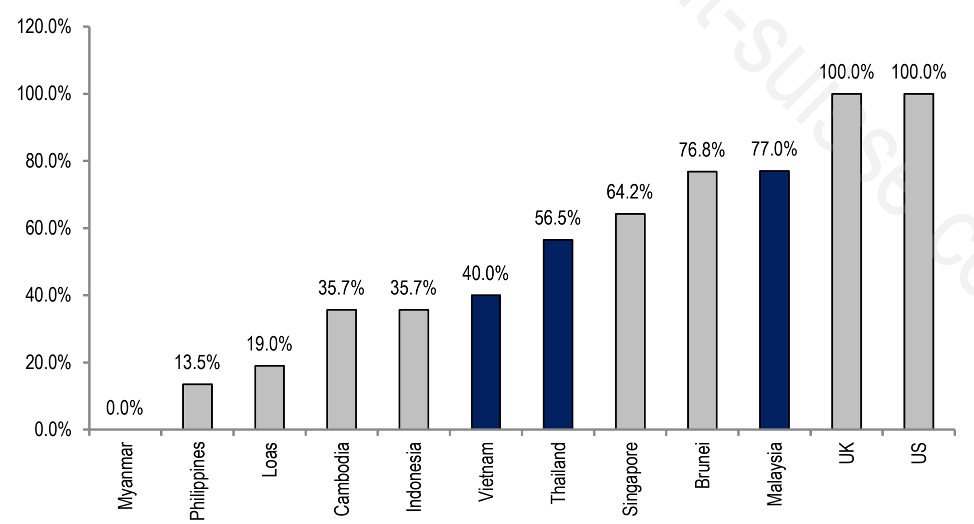
Source: IDC Malaysia Analysis

Figure 27: How the credit reporting industry in ASEAN can grow revenue

US/UK	ASEAN	ASEAN potential growth path
Industry revenue per capita 2020: RM83.39/RM59.38	**Industry revenue per capita 2020: RM1.48**	**Increase revenue per capita through growth to above RM1.48 beyond 2020**
Percentage of adults covered by credit bureau: 100%/100%	**Percentage of adults covered by credit bureau: 46%**	**Increase percentage covered by increasing access to credit bureau associated products and services**
Market(s) dominated by the 3 major players, namely, Experian Plc, TransUnion LLC and Equifax Inc	**Market fragmented with multiple smaller players operating in each market**	**Potential to consolidate market and increase depth of customer databases through inorganic acquisition and organic competition**
Typical services offered in the US/UK market core credit services - average 50% of revenue	**Typical services offered in the ASEAN market core credit services - average 80% of revenue**	**Increase services offered to the ASEAN market via**
- Credit reporting for large businesses/SMEs	- Credit reporting for large businesses/SMEs	- Increase core credit services revenue by more dedicated credit reporting solutions for SME customers
- Consumer services - average 25% of revenue	- Consumer services - average 10% revenue	- Increase consumer credit services revenue by increasing penetration and access to direct to consumer products
- Direct-to-consumer products	- Direct to customer products (just starting)	- Increase analytical services revenue by introducing services such as debt management, vehicle identities and lead generation into the market
- Analytical services - average 25% of revenue	- Analytical services - average 10% of revenue	- Increase penetration and access to customer and market insights, automation of application processing (eKYC) ad fraud detection and management
- Customer and market insights	- Customer and market insights	
- Automation of application processing - eKYC	- Automation of application processing - eKYC	
- Fraud detection and management	- Fraud detection and management	
- Debt management		
- Vehicle identities		
- Lead generation and prequalification		
Typical industry penetration in US/UK market	**Typical industry penetration in ASEAN market**	**Increase industry penetration in ASEAN market**
- Financial services, direct-to-customer, businesses, health, retail, telecommunication, automotive, software/profession services, insurance, media and public sector	- Financial services, insurance, direct-to-consumer businesses, retail and telecommunication	- Strengthen coverage into financial services, insurance, direct-to-customer businesses, retail

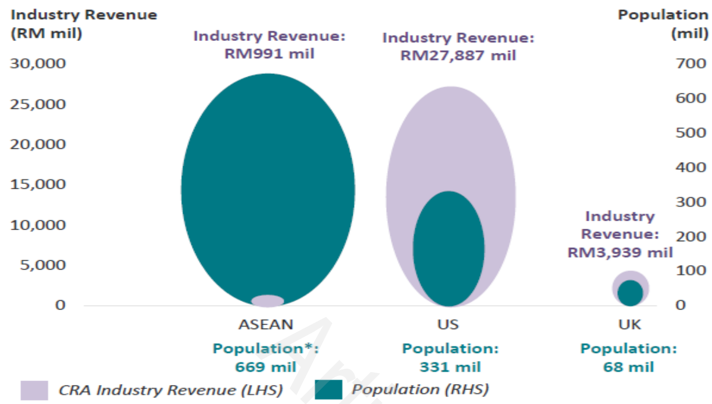
Source: IDC Malaysia Analysis

Figure 28: % of population covered by Credit Bureau (2019)



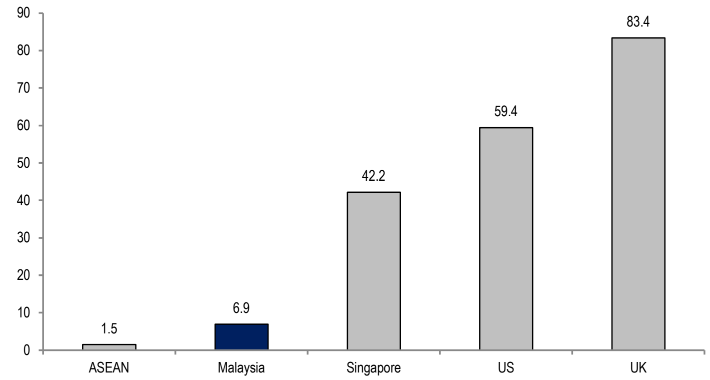
Source: IDC Malaysia Analysis

Figure 29: 2020 population vs credit reporting industry revenue



Source: IDC Malaysia Analysis

Figure 30: Credit reporting revenue per capita 2020 (RM)

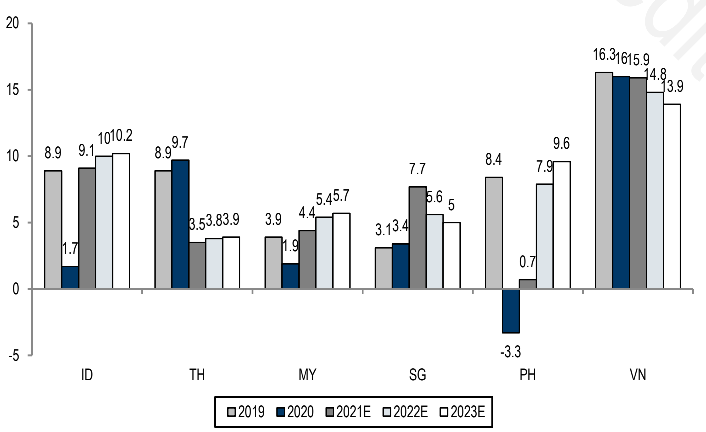


Source: IDC Malaysia Analysis

Pick-up in credit growth

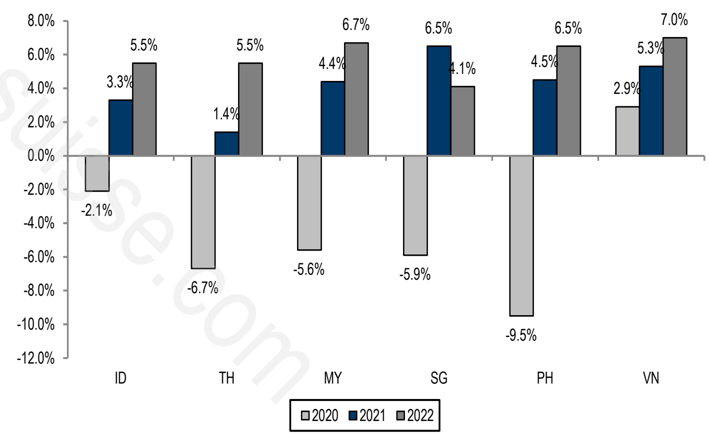
Credit reporting revenue should also capture the anticipated pick-up in loan demand as ASEAN countries gradually recover from the adverse impact of the pandemic. Given that credit reporting revenue continued to grow albeit at a slower pace in 2020 despite the economic headwinds, we believe that the projected pick-up in loan growth in 2021-22 should bode well for the credit reporting industry. Most ASEAN countries have vaccine plans in place to achieve herd immunity by 1H22. As such, GDP growth across all major ASEAN countries is expected to gather momentum in 2021-22. Longer term, the low credit penetration, favourable demographics and income-per-capita growth should help to fuel loan demand, particularly for countries like the Philippines, Indonesia, and Vietnam, which have the most attractive attributes.

Figure 31: Loan growth for region



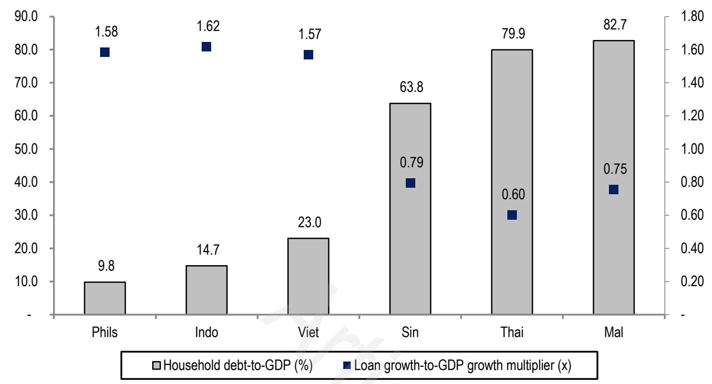
Source: Credit Suisse estimates

Figure 32: GDP growth 2020-22E



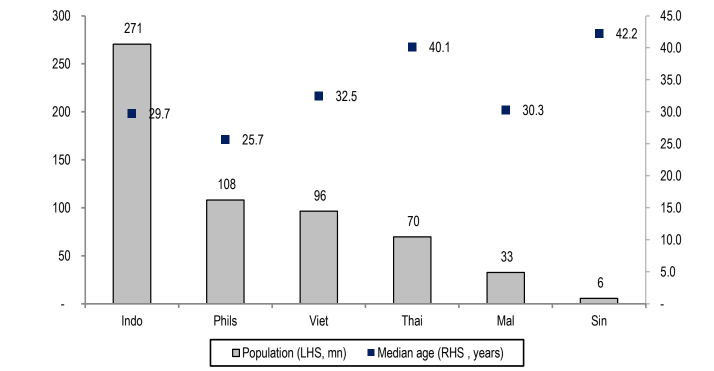
Source: The BLOOMBERG PROFESSIONAL™ service, Credit Suisse estimates

Figure 33: Household debt-to-GDP vs loan growth-to-GDP growth multiplier



Source: World Bank, Credit Suisse estimates

Figure 34: ASEAN countries—population and median age



Source: World Bank, Credit Suisse estimates

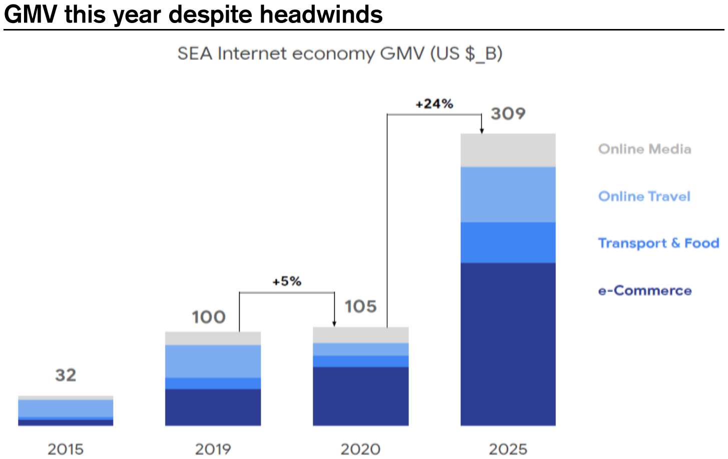
Acceleration in digital adoption

The pandemic has accelerated the transformation and shift for consumers to move to digital for their needs. This shift will increase the need for real-time credit decision-making in digital ecosystems and present significant opportunities for CRAs. Those with capability to scale and connect the credit ecosystem to multiple industries from new data sets on customers should be better positioned to gain market share. Already CRAs such as CTOS are seeing a pick-up in revenue growth driven by greater demand for products and services that are linked to the rapidly growing digital transaction activity (e.g., eKYC, fraud prevention products, credit screening for digital onboarding of customers and loan applications, etc.).

ASEAN internet economy could triple by 2025

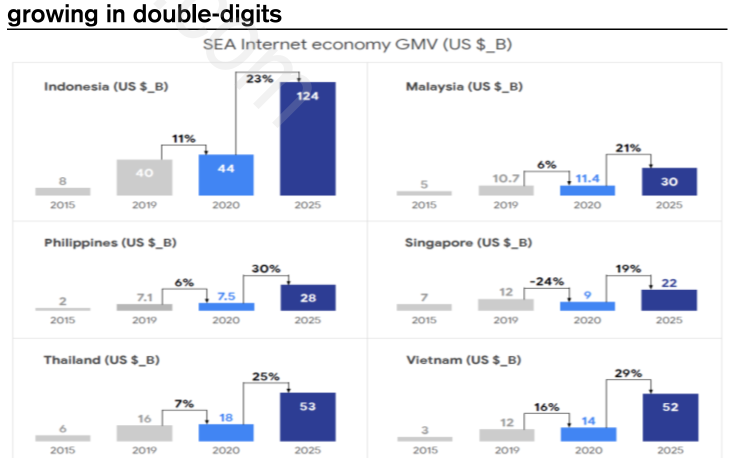
The ASEAN internet economy grew 5% in 2020 to US$105 bn despite the strain on economic activity caused by COVID-19 according to a recent report published by Google. Google estimates that the Southeast Asia (SEA) internet economy could almost triple to US$309 bn (equivalent to 24% CAGR) by 2025, driven by a sharp surge in e-commerce (+23% CAGR), online media (+15% CAGR), online travel (+33% CAGR) and digital consumption of transport as well as food (+30% CAGR). The ASEAN countries ranked by projected rate of growth in their respective internet economies are the Philippines (30% CAGR), Vietnam (29%), Thailand (25%), Indonesia (23%), Malaysia (21%), and Singapore (21%).

Figure 35: The SEA internet economy to exceed US$100 bn GMV this year despite headwinds



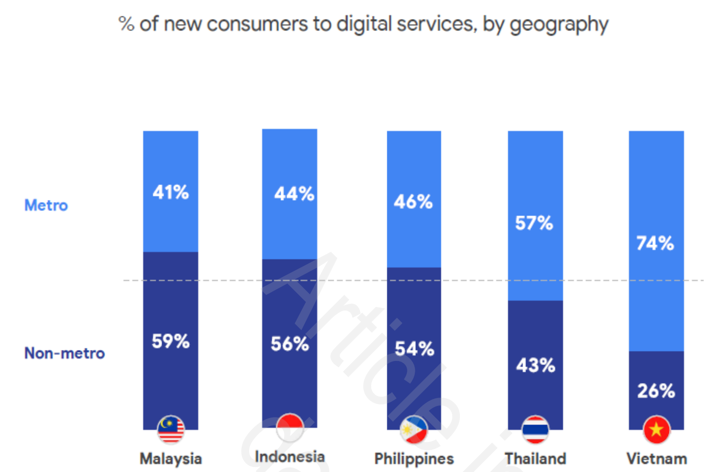
Source: Google e-Conomy SEA 2020

Figure 36: Vietnam and Indonesia's digital economies still growing in double-digits



Source: Google e-Conomy SEA 2020

Figure 37: Malaysia ranked highest in digital growth from non-metro areas



Source: Google e-Conomy SEA 2020

Figure 38: Suppliers are trying to come online to meet the rising demand

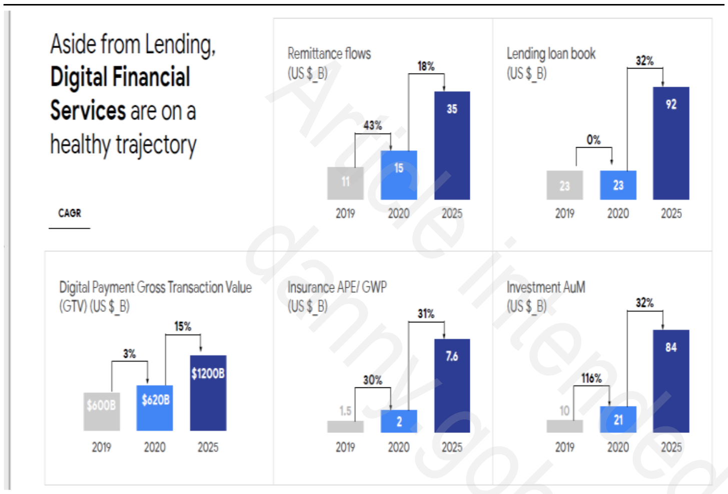
Source: Google e-Conomy SEA 2020

Other notable trends worth highlighting:

- **Greater digital adoption by consumers:** Over the course of the pandemic in 2020, 40 mn new users started using the internet in SEA and raised the internet user population to 400 mn (vs 260 mn in 2015). Feedback from users suggest that 36% of all digital service consumers in SEA are new to the service due to COVID-19.
- **Higher penetration in non-urban areas:** Interestingly, in countries such as Malaysia, Indonesia, and the Philippines, a high proportion of new digital users come from non-urban areas (please refer to Figure 37 above). In Malaysia, Indonesia, and the Philippines, 59%/56%/54% of new digital users reside in non-urban areas. Feedback from the new digital users suggests that nine out of ten of them intend to continue using the service post pandemic. Due to the pandemic, data shows that average time spent on the internet increased by an hour to 4.7 hours per day (vs 3.7 hours pre-pandemic lockdown) and is expected to remain at 4.2 hours even after lockdown restrictions have eased.
- **Digital adoption by businesses also rapidly growing:** Due to the reduction in people movement and surge in online activity, businesses are also looking to capitalise on this trend through digital adoption. There appears to be a favourable trend showing a sharp jump in search for online selling-related enquiries (please refer to Figure 38).
- **Robust growth in digital financial service activity:** Data released by Google shows that digital payment gross transaction value grew 3% YoY in 2020 to US$620 bn and is projected to deliver a CAGR of 15% to US$1.2 bn by 2025 (Figure 39). Among the more noteworthy trends is the surge in remittance flows by 43% YoY to US$15 bn in 2020 and projected to have a CAGR of 18% to US$35 bn by 2025. Digital purchase of other financial services products such as insurance and investments also picked up sharply. Demand for life and health insurance rose due to the pandemic as reflected in online insurance gross written premium growth by 30% YoY to US$2 bn and is expected to grow to US$7.6 bn by 2025 (or 31% CAGR). A buoyant investment climate, despite the economic headwinds, drove investment assets under management from online purchases up sharply by 116% YoY to US$21 bn and this is projected to increase to US$84 bn by 2025 (or 32% CAGR). However, lending through digital platforms was flat in 2020 at US$23 bn due to higher credit risks faced by peer-to-peer lenders. Nevertheless, Google estimates an increase in digital loans to US$92 bn by 2025 or 32% CAGR.

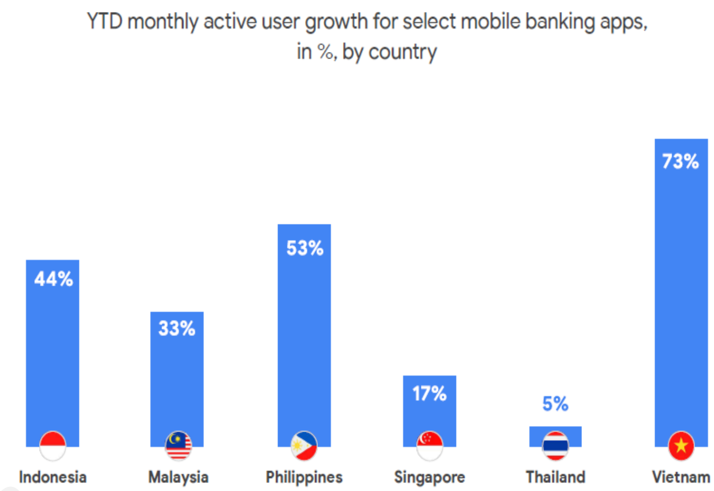
- **Shift to cashless payments:** The use of e-wallets has risen at the expense of cash payments to account for 3% of transactions (vs 1% in 2019). The share of credit/debit cards and interbank transfers in the total gross transactions has been relatively stable at 20% (vs 21% in 2019) and 18% (no change vs 2019), respectively (see Figure 41). Google projects that the share of transactions through e-wallets/credit/debit cards and interbank account transfers could rise to 6%, 24% and 21%, respectively, by 2025 at the expense of cash usage.

Figure 39: Digital financial services are on a healthy trajectory



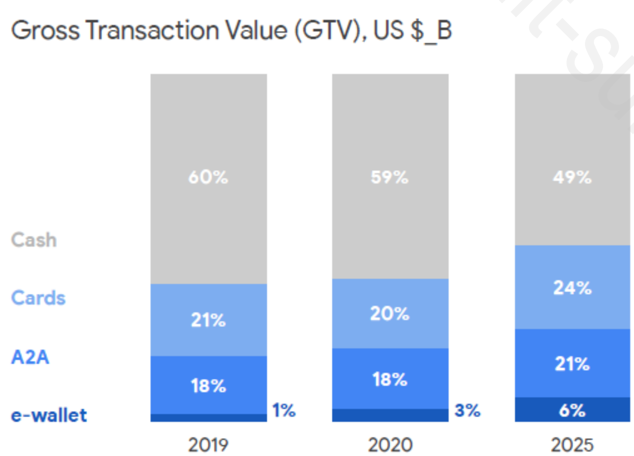
Source: Google e-Conomy SEA 2020

Figure 40: Leading financial institutions enhanced their apps and saw engagement increase



Source: Google e-Conomy SEA 2020

Figure 41: Digital payments to retain a strong foothold



Source: Google e-Conomy SEA 2020

Demand from digital banks

ASEAN CRAs will also stand to benefit from the new digital banks entering the financial markets. Given these digital banks will be on an aggressive growth path with greater focus on serving the underbanked population, we expect demand from these digital banks for CRA services to be potentially greater than conventional banks. We summarise below the digital banking roll-out plans across key markets in ASEAN.

- **Indonesia:** Digital banks are regulated on similar laws (different in practice) in Indonesia, where a full bank licence is allowed to launch a digital presence subject to OJK approval. This has led to: (1) tech companies acquiring banks according to news sources (Gopay-Bank Jago, Shopee-Bank Kesejahteraan Ekonomi); and (2) banks launching a digital presence through a multitude of apps across consumer, P2P and agency banking, among others. It is well accepted that the high adoption of digital banking accelerated in 2020 driven by the necessity of avoiding social interaction; we believe that neobanks should accelerate their product launch over 2021-22 and driving this trend. The key players to watch for here are all super-apps of incoming digital banks: (1) Bank Jago (ARTO IJ), Go-Jek owns a 22% stake; (2) Shopee bank (Bank Kesejahteraan Ekonomi); (3) Traveloka Bank, traditional banks digital presence; (4) BCA digital bank; and (5) BRI digital presence.

- **The Philippines:** The BSP remains keen on improving financial inclusion in the Philippines, especially through digital banking and fintech, i.e., digital bank licensing was implemented in Nov-2020 albeit the current number of applications remains low. The Philippines market is still underpenetrated across different types of financial products and services, leaving plenty of room for growth for both traditional and digital delivery channels.

- **Malaysia:** Due to the pandemic, the submission deadline for five digital banking licences has been pushed back to 30 June 2021 (originally slated for mid-2020). Therefore, the new licences will only be finalised and issued in 1Q22. This affords more time to incumbent conventional banks to strengthen their digital platform to deal with competitive threats from new digital banks. So far, Axiata, Grab, Sunway, AMTB, MyMy, Razer Fintech, Paramount Group, Green Packet, Sarawak state government and Johor state government are among the parties who have indicated interest to bid for the new digital banking licences. We also believe that TNG Digital (51% owned by CIMB and 49% owned by ANT Group) could potentially be interested to bid for a licence. The licences will be issued in 1Q22. The rules imposed on digital banks by the regulator cap the asset base for each bank at RM3 bn during the foundation phase over the initial three to five years and each bank has to maintain RM100 mn of minimum capital that is unimpaired by losses. By the end of the foundation phase, the digital banks will be required to raise the capital base to at least RM300 mn. While the cap on the asset base implies that the collective maximum asset base for the five digital banks would only amount to a maximum of RM15 bn or less than 1% of the existing banking system loan base, it is conceivable that digital banks that offer unique service that differentiates them from banks (e.g., Grab, telecommunication companies) could extract more fee income.

- **Singapore:** The MAS awarded two digital full bank licences (DFB) and two digital wholesale banking licences (DWB) in Dec-2020. The DFBs were awarded to SEA Ltd and a Grab-Singtel JV; meanwhile, the DWBs were awarded to Ant Financial and consortium led by Greenland Financial. DFBs will be able to take retail deposits, while DWBs will only be allowed to provide banking services to SMEs and other non-retail customers. From a deposit perspective, we believe DFBs' existing brands will facilitate customer acquisition. We expect the DFBs to focus on the under-served SME segment and alternative data could help to serve these segments better. In the near term, deposit caps (S$50 mn aggregate deposit cap and S$75k individual deposit cap) will ensure minimal disruption until the new DFBs prove to MAS that their business models are sustainable.

- **Thailand:** In Thailand, a strict regulatory regime has made the threat of any non-bank or foreign party acquiring digital banking licences benign. KBANK and SCB are the most advanced on the digital front, as measured by their digital banking bases. Both banks have close to or over 10 mn users and more broadly banks have seen rising adoption in digital transactions. By virtue of being the most digitally advanced, KBANK and SCB will likely be at the forefront of the digital drive. With the aim of tapping into the lower end of the income ladder where traditional processes such as calculating debt-servicing ratios (DSRs) using salary slips is not possible, both are developing capabilities to use digital data to help. This involves using data such as transaction history in mobile apps and/or behaviour on e-commerce apps (Lazada, Shoppee) within the bank's ecosystem for credit scoring.

- **Vietnam:** While most Vietnamese banks have a digital transformation strategy since 2018, implementation—barring a few private sector banks (TCB and VPB)—has been slow, with digitalisation activities accelerating post COVID-19. TCB and VPB, however, have benefitted from early adoption of a digital strategy reflected by robust growth in e-user engagement and digital volumes, higher CASA balances, increase in cross-sells and opex savings. While the process of digitalisation is accelerating with an increasing number of fintech providers, including foreign brands, most of them continue to collaborate with local and foreign banks instead. SBV is also looking to apply on a pilot basis a regulatory sandbox allowing fintech companies to provide some banking services in 2021. We believe a collaborative model between banks and fintech should continue in the future. Moreover, high-quality private sector banks will continue to invest aggressively to develop their digital capabilities in order to further strengthen their market position.

Figure 42: Digital banks landscape summary

Countries	Status of digital banking licence	Any restrictions?	Most advanced incumbent banks on digital	Median population age	EDC/1k population	Smartphone penetration (%)	Projected digital economic growth 20-25E (%)
Indonesia	Digital banks are regulated on similar laws (different in practice) in Indonesia, which is a full bank licence is allowed to launch digital presence subject to OJK approval. This has led to tech companies acquiring banks and banks launching their digital presence through apps.	None	BCA, BRI	30	5	31.1	23
Malaysia	Five licences to be issued in 1Q 2022	RM3 bn cap over 3-5 years	Maybank, CIMB	30	22.3	90.7	21
Philippines	Digital banking licensing was implemented in Nov-2020 but the number of applicants remain low.	Minimum capitalisation of P1 bn (US$20.8 mn)	BPA	26	2.7	33.6	30
Singapore	Two digital full bank (SEA, Grab-Singtel) and two digital wholesale bank (ANT, Greenland) licences issued in Dec-2020.	Near term deposit cap at S$50 mn and individual cap at S$75k	DBS	42	32.7	81.7	19
Thailand	A strict regulatory regime has made the threat of any non-bank or foreign party acquiring digital banking licences benign. KBANK and SCB are the most advanced on the digital front.	None	KBank, SCB	40	12.5	43.7	25
Vietnam	Vietnam has indicated that it is likely to explore regulating digital banking in the near future. Regulatory framework is mostly evolved around the payment industry.	None	TCB, VPB	32	2.9	44.9	29

Source: Company data, Credit Suisse estimates

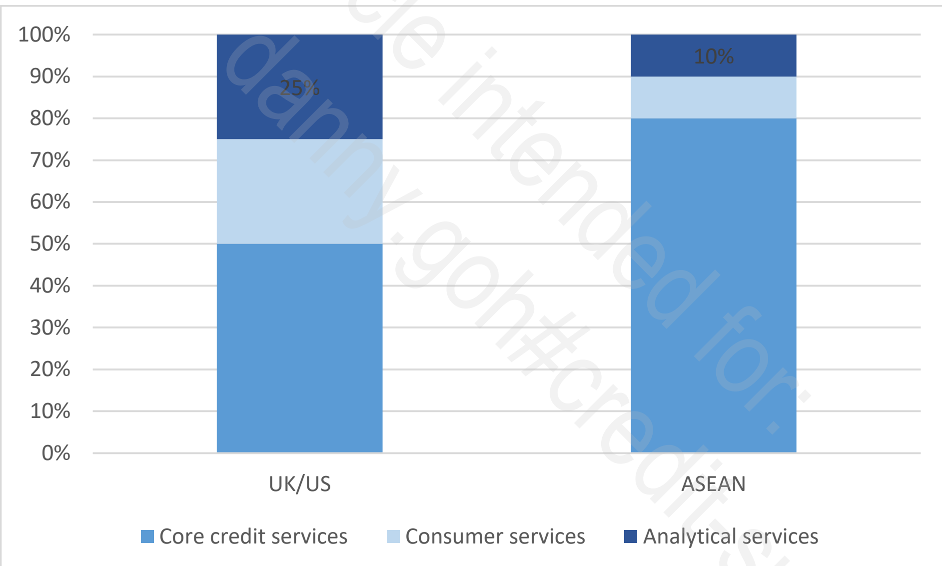
Room to grow untapped areas

Through a comparison of the typical revenue composition of more established CRAs in the US and the UK markets with ASEAN players, it becomes apparent that there is scope for the ASEAN credit reporting industry to extract more revenue from untapped areas. The underexplored segments that ASEAN CRAs can increasingly focus on to further enhance their revenue streams are:

- **Consumer services' revenue** typically account for 25% of total revenue for more established players in the UK and the US, but only contribute 10% of revenue for the ASEAN CRAs. This implies that there is still much scope to grow the direct-to-customer revenue streams. CRAs can focus on increasing penetration and access to DTC products.

- **Analytical services** contribute some 25% of revenue for more established CRAs in UK and US but revenue from this segment only typically makes up 10% of revenue for ASEAN CRAs. As such, this is also a huge untapped area where CRAs increase penetration through introducing services such as debt management, vehicle identities and lead generation into the market. Also CRAs can step up efforts to sell digital solutions related to customer and market insights, automation of application processing for eKYC as well as fraud detection and management.
- **Underpenetrated industries:** A comparison of the typical customers served by CRAs in more developed markets such as the UK and the US versus ASEAN, suggests that there is scope to: (1) strengthen the coverage of financials, insurance and DTC business segments, and (2) expand to health, automotive, software and professional services, media and public sector.

Figure 43: Typical breakdown of revenue for ASEAN vs UK/US CRAs show that there is plenty of scope for ASEAN players to tap consumer and analytical revenue streams

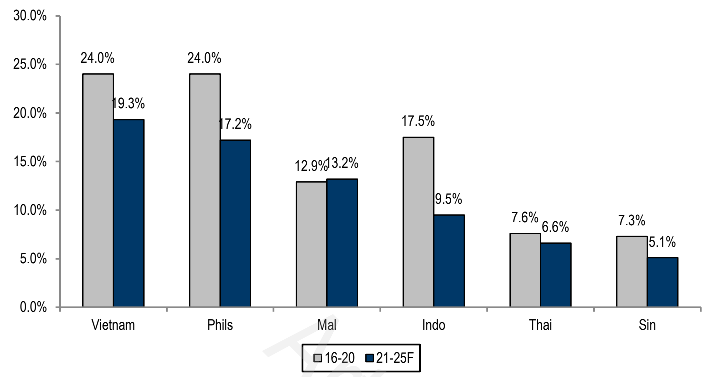


Source: IDC Malaysia Analysis

Plenty of upside for Malaysia market

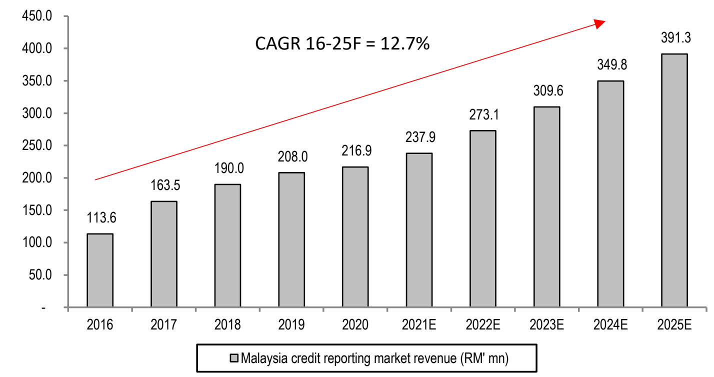
The Malaysia credit reporting market size (measured by revenue) is expected to grow at a 13.2% CAGR over 2021-25 and outpace ASEAN region growth of 10.8% p.a., according to IDC's projections. The projections place Malaysia as the third fastest growing market among the major ASEAN markets after Vietnam (+19.3%) and the Philippines (+17.2%). Malaysia is currently the second-largest credit reporting market in ASEAN, behind Singapore, based on 2020 revenue. However, based on growth projections, Malaysia is poised to become the largest market in ASEAN by 2022.

Figure 44: Credit reporting CAGR 2016-20 and 2021-25F (%)



Source: IDC Malaysia Analysis

Figure 45: Malaysia credit reporting market size (RM mn)



Source: IDC Malaysia Analysis

Figure 46: Total addressable market for credit reporting industry solutions by industry (RM mn)

	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E	CAGR 16-20	CAGR 21E-25E	CAGR 16-25E
Financial services	124.1	151.0	176.4	199.6	203.4	310.1	403.2	491.9	592.3	682.3	13.1%	20.8%	21.8%
Direct-to-customers	14.4	17.5	20.3	22.8	23.5	39.8	56.5	74.4	96.3	122.6	12.9%	26.8%	32.4%
Retail	3.3	3.9	4.6	5.1	5.2	12.1	21.5	33.8	42.1	50.1	12.0%	35.1%	42.6%
Healthcare	1.8	2.0	2.3	2.6	2.7	12.1	17.8	26.5	40.4	60.0	10.9%	47.9%	49.2%
Insurance	4.8	6.0	7.1	7.8	8.0	12.4	19.3	27.2	38.1	52.9	13.7%	30.5%	43.7%
Telco & utilities	4.9	6.0	7.1	7.9	8.1	13.1	18.5	26.1	34.2	44.6	13.3%	27.8%	35.8%
Automotive	1.8	2.3	2.4	2.8	3.0	6.3	11.9	19.4	30.9	49.1	13.9%	44.7%	67.3%
Medica technology	1.7	2.1	2.5	2.7	2.8	6.3	10.9	19.0	28.8	43.7	13.5%	43.7%	62.5%
Real estate	1.9	2.3	3.3	5.1	5.4	6.4	7.6	11.1	17.6	26.9	29.6%	34.2%	43.2%
Software and professional services	1.8	2.2	2.5	2.7	2.9	4.8	6.2	8.8	9.5	9.3	12.9%	21.6%	21.2%
Total	**160.5**	**195.3**	**228.6**	**259.2**	**264.9**	**423.4**	**573.4**	**738.3**	**930.2**	**1,141.5**	**13.3%**	**24.4%**	**28.2%**

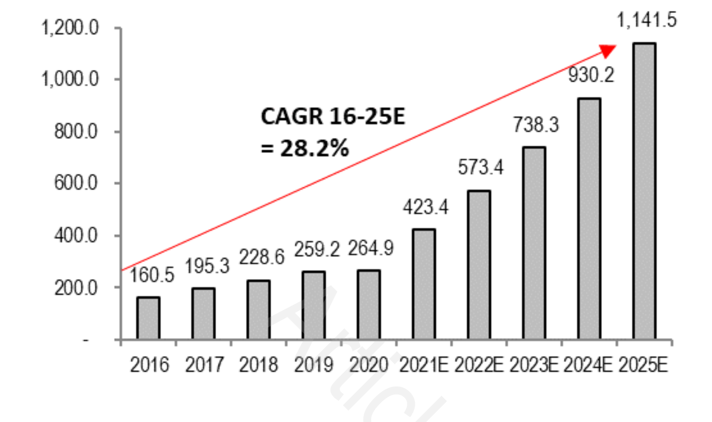
Source: IDC Malaysia Analysis

Here are some of the key drivers that could fuel the growth of Malaysia's credit reporting market:

- **Pick-up in digital banking:** The impending issuance of five new digital banking licences in Malaysia in early 2022 is expected to generate more demand for the services of CRAs. Digital banking transaction volumes should be fuelled by: (1) continued efforts by conventional banks to develop their digital capabilities to better serve customers; and (2) focus by fintechs and digital banks on tapping the underserved market segment. According to IDC's study, even though Malaysia's banked population is high at 96% of the population, it is estimated that 60% of Malaysia adults are underserved without a regulated credit account. The usage of alternative data in credit scoring is gaining momentum in Malaysia, as digital players such as e-wallet providers and lifestyle or ecosystem apps now seek to increase the total addressable market by targeting borrowers who may not have previously established a formal credit record. This alternative data is sourced from telecommunication payment records, and payments made on e-wallets and trade suppliers and vendors. Growing credit volumes bode well for the credit reporting industry, creating higher demand for innovative players who incorporate analytics from reliable alternative data in their product suite.

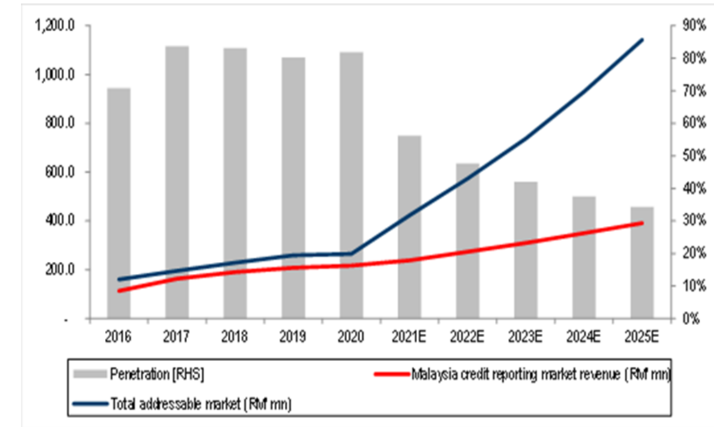
- **Raise penetration of addressable market:** While Malaysia's credit reporting revenue is projected to grow at 13.2% p.a. over 2021-25, the total addressable market is projected to grow at a much faster pace of 28% p.a. over the same period with a significant 60% YoY jump anticipated in 2021. Hence, the projected credit reporting industry revenue for 2021-22 only translates to a 56%/48% penetration of the addressable market compared to >80% in 2017-20. With a wider range of digital solutions and focus on underserved segments, CRAs can potentially clinch a larger share of the addressable market.

Figure 47: Total addressable market expected to grow at double the projected industry growth rate (%)



Source: IDC Malaysia Analysis

Figure 48: Revenue penetration rate of Malaysia credit reporting market

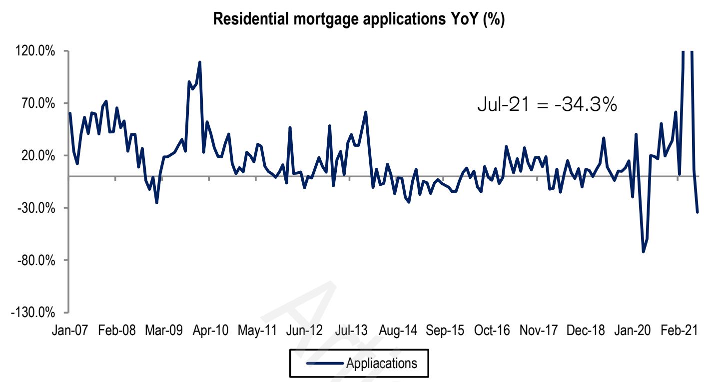


Source: IDC Malaysia Analysis

- **Huge upside potential for SME sector:** Of Malaysia's business establishments 98.5% are SMEs, collectively contributing RM552.3 bn or 38.9% of the country's GOP in 2019. The provision of financial sector services for SMEs is supported by a comprehensive ecosystem that consists of an enabling infrastructure through the establishment of SME-focussed banks and various governmental policies. Better understanding among SMEs of the risks and benefits involved in maintaining good payment behaviours to ensure the certainty of funding at affordable rates could help CRAs onboard more SME customers. The fact that a leading player like CTOS only has 17k SME customers out of a total of 990k SMEs in the country suggests that the SME segment is significantly underserved.

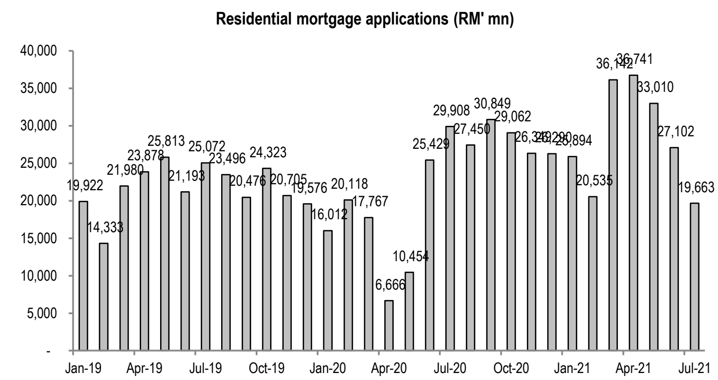
- **Loan growth:** Without factoring in an increase in penetration of underserved customer segments and increase in wallet share from more value-added services, credit reporting industry revenue should at least track growth in loans. While overall loan growth for the Malaysian banking system is expected to remain fairly modest in the 4-5% range in 2021, we expect growth to pick up in 2022 to at least 6% as asset quality concerns ease. Also while loan growth is mainly weighed down by sluggish appetite for corporate loans, the residential housing and auto financing segments saw a pick-up in credit demand prior to the tighter lockdown measures imposed from May 2021 onwards. These two loan segments make up 45% of the total banking system loans and have been growing at a healthy pace of 7% up to June 2021 but slowed a touch to 6% in July 2021. Residential mortgage leading indicators also look encouraging as residential housing loan approvals peaked in Mar-April 2021 and subsequently pulled back due to the lockdown measures but we anticipate a recovery towards 4Q21 as mobility trends gradually normalise. The HOC (Home Ownership campaign), which offers a waiver on property stamp duty, is a key factor driving housing demand together with increased affordability with interest rates at all-time low.

Figure 49: Residential mortgage applications spiked in Apr-2021



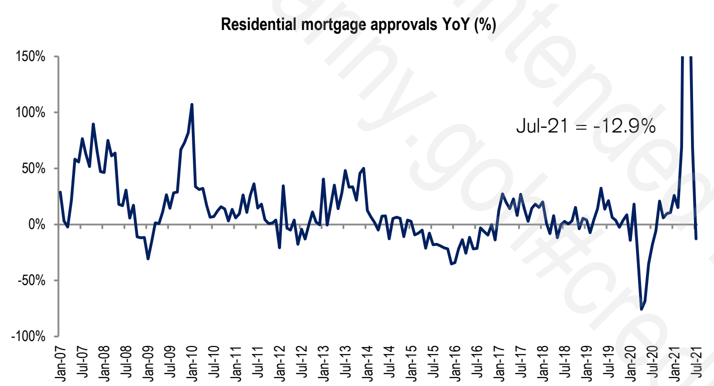
Source: BNM

Figure 50: Residential mortgage application in Mar-2021 surpassed pre-COVID-19 levels



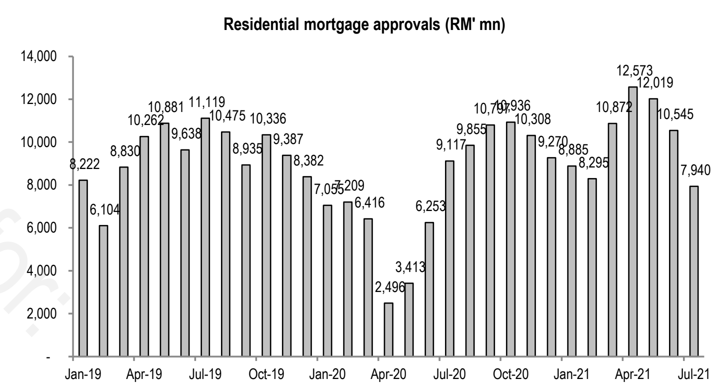
Source: BNM

Figure 51: Residential mortgage approvals YoY growth



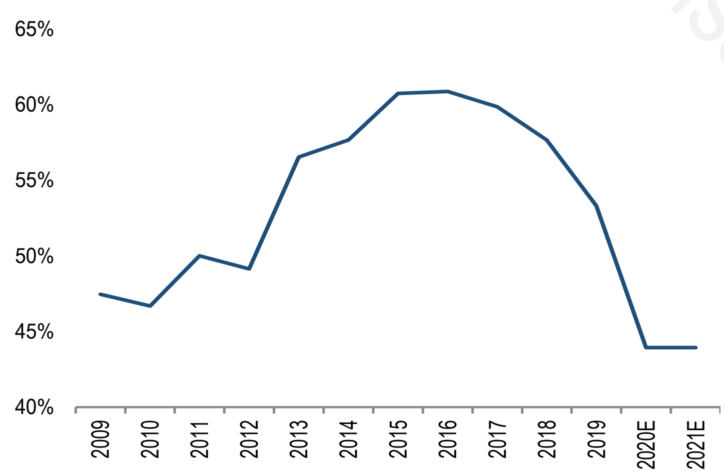
Source: BNM

Figure 52: Monthly residential mortgage approvals



Source: BNM

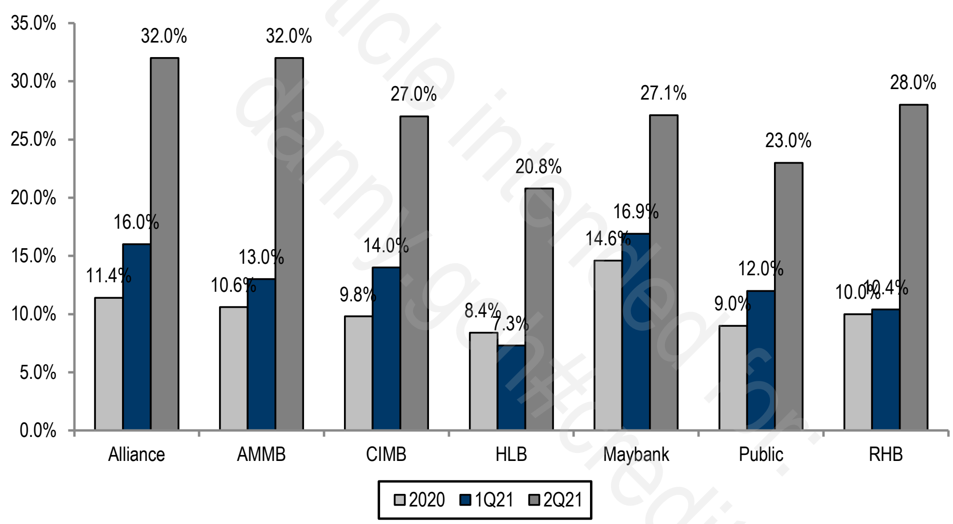
Figure 53: Property affordability index



Source: Credit Suisse estimates

- **Increased focus on asset quality amid elevated loan restructuring.** With further relief on repayment of loans for another 6 months starting July 2021 offered under the government's PEMULIH fiscal stimulus scheme, restructured loans surged to between 20% and 32% of total loans for the banks as at August 2021 (from 7% to 17% back in May 2021). With an extension in the loan forbearance measures, impaired loan ratio for the banking system is only expected to peak in 2022. As such, there could be more demand from banks for comprehensive reports and additional credit screening. Moreover, the persistent pressure from politicians for banks to consider waiving interest for the lower income groups also necessitates enhanced credit risk scrutiny from banks. Additional datasets by CRAs such as industry risk scoring, trade payment behaviour analytics, peer comparisons as well as consumer behavior trend analytics, amongst others, could help banks better understand the risk profile of its customers.

Figure 54: MY banks loans under R&R as a % of total loans



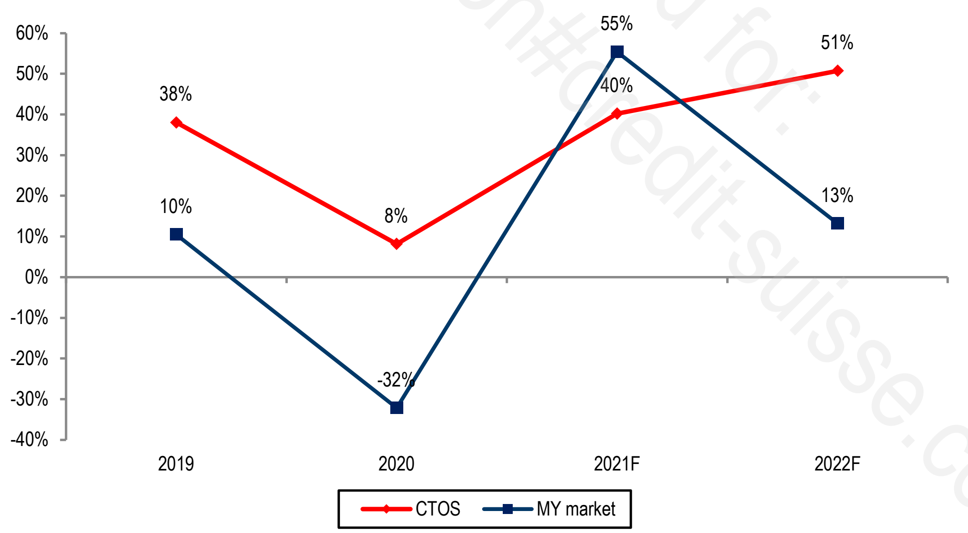
Source: Company data

Poised for multi-year growth

We project a 46% net profit CAGR for CTOS over 2021-25. Key revenue drivers for its three main customer segments as follows:

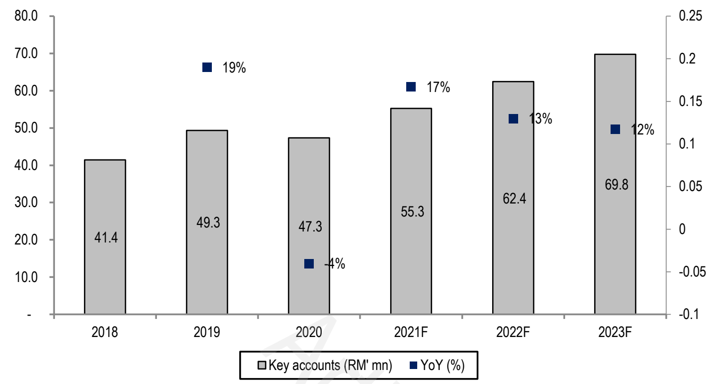
- **Key accounts:** CTOS currently has 430 key accounts and has achieved 100% customer retention since 2017. Going forward, management aims to target new business segments by offering digital solutions that cater for their specific needs. The key segments identified where CTOS can offer a holistic customer solution include real estate, automotive and insurance sectors. The new digital banks as well as their ecosystem of supporting vendors could also be prospective customers that CTOS can target. In this segment, CTOS can look to increase wallet share by offering data analytics solutions.
- **Commercial:** There is significant scope to increase the customer base for this segment. Over 2018-20, the group has been growing the customer base at a 14% CAGR to 17k today. These customers are mainly SMEs. From the 990k total SMEs in the country, management has identified 100k SMEs as its addressable market, implying that there is still lots of scope for CTOS to further broaden its subscriber base.
- **DTC:** Currently CTOS merely has 1.4 mn subscribers after growing at a rapid pace of 36% p.a. over past two years. Considering that CTOS has a 15 mn consumer database, there is still lots of growth potential. According to IDC's study, the addressable market for DTC is expected to grow at 27% p.a. CAGR over 2021-25 and a huge step-up is expected over 2021-22 where growth is projected at 40% p.a.

Figure 55: CTOS net profit growth vs MY market net profit growth



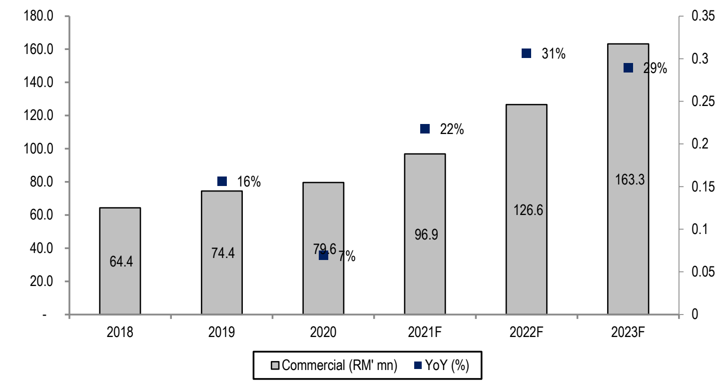
Source: Company data, Credit Suisse estimates

Figure 56: Key account revenue



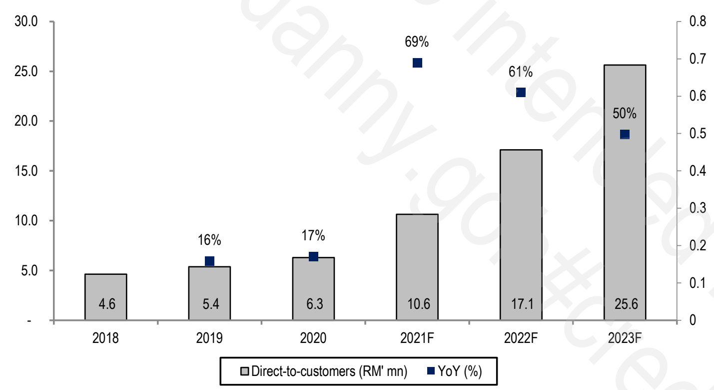
Source: Company data, Credit Suisse estimates

Figure 57: Commercial customers revenue



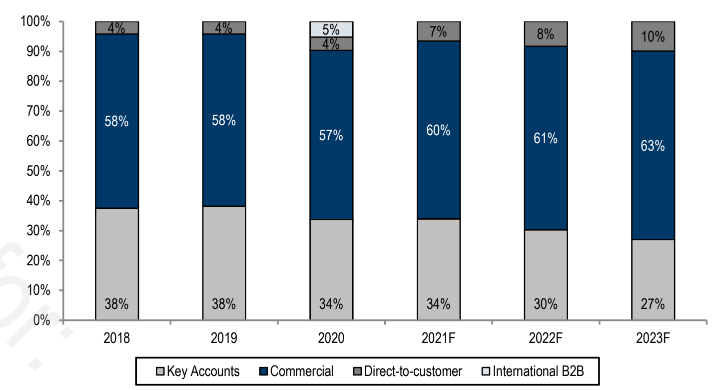
Source: Company data, Credit Suisse estimates

Figure 58: Direct-to-customer revenue



Source: Company data, Credit Suisse estimates

Figure 59: Revenue contribution by customers



Source: Company data, Credit Suisse estimates

In our opinion, CTOS can potentially sustain a 46% p.a. growth in core net profit over the next five years driven by the following factors:

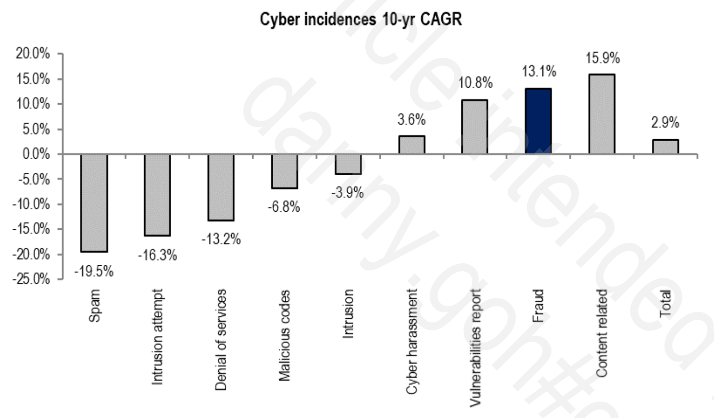
New products to capture secular growth opportunities

CTOS has recently launched new products across three customer lifecycles to capitalise on the evolving business landscape to generate new revenue streams. Among these products are:

- **CTOS eKYC:** This is a digital onboarding solution that provides banks and businesses with digital identity verification that meets regulatory standards. CTOS eKYC is made available to both key accounts and commercial customers. Only three out of the seven CRAs offer this product, namely CTOS, Experian and CRIF. During the latest results briefing for 1H21, CTOS' management indicated that revenue generated from eKYC grew 55% YoY and was among the key drivers of growth in the key account segment. Also management also shared that eKYC product has been rolled out to 24 customers with over 30 additional customers in the pipeline.
- **CTOS SME Score:** The CTOS SME Score is a three-digit number that is reflective of the credit health of the SME. This is sold as part of the credit reports or separately.
- **CTOS IDGuard:** CTOS IDGuard is a proprietary fraud bureau, offering a data sharing platform for key account customers, particularly banks, to detect and prevent application fraud. CTOS is a pioneer in this area and the first application fraud bureau in Southeast Asia and only fraud bureau in Malaysia that offers this solution. According to management, income derived from digital solutions in 1H21 accounted for 26% of the increase in revenue with CTOS ID Guard accounting for half of the growth. Revenue derived from

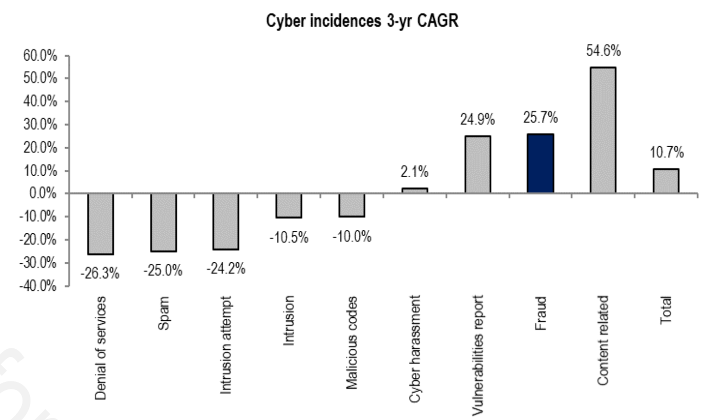
digital solutions (not credit screening related) grew 185% YoY albeit from a low base, and management sees huge upside potential as income from core credit services products still accounts for bulk of total revenue. We believe that CTOS' fraud prevention product has plenty of runway for growth given that cyber fraud in Malaysia has been growing at a rapid pace and so far CTOS appears to be the only solution provider. Data released by the Malaysia Computer Emergency Response Team (MyCert) shows that cyber fraud has been growing at a rapid pace of 25% p.a. CAGR over the past three years (please refer to chart below). According to management, since CTOS IDGuard was launched in July 2020, it has successfully identified and prevented potential fraud losses of up to RM50 mn in fraudulent applications including personal loans, cards, auto-financing, mortgages, and SME loans, which equate to a 74% increase from the banks' normal detection rates.

Figure 60: Cyber incidences 10-year CAGR shows cyber fraud rose 13% p.a.



Source: Malaysia Computer Emergency Response Team (MyCert)

Figure 61: Cyber fraud incidents have grown at a much faster rate in past 3 years



Source: MyCert

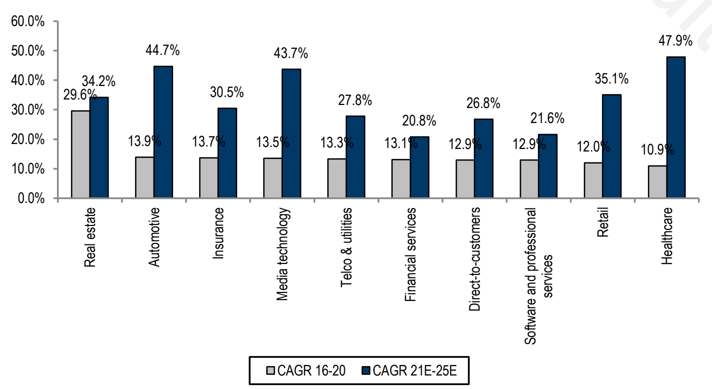
- **CAD:** CAD is a SaaS solution that automates a customer's credit assessment process using analytics and insights from their proprietary information databases. CAD is designed to be easy to use and scalable for any business that makes credit decisions, regardless of the industry. CAD customers currently include banks and corporates, including both key account and commercial customers.
- **CTOS Tenant Screening report:** The report contains identification verification, KYC screening information, financial checks, income estimation and historical legal cases or bankruptcies, which allows landlords or agents to screen prospective tenants. CTOS is the only CRA that offers this service at the moment.
- **Collaboration with investee companies:** Based on feedback from management, we understand that CTOS intends to work closely with its 22.6% associate BOL to replicate the latter's Matchlink product in Malaysia. MatchLink is BOL's newest product offering. It is a business networking platform primarily to facilitate connection between buyers, suppliers and sources of funding. Launched in July 2021, the application can be used to support business decision making, reduce operational process, mitigate risks, and increase opportunities. MatchLink is currently a B2B platform but there are plans to include B2C features in the future. CTOS recently acquired a 5% stake in RAM (Rating Agency Malaysia), a leading provider of independent credit ratings, research, training, risk analysis, environmental, social and governance ("ESG") analytics and bond pricing and valuation data. We understand that management intends to work closely with RAM to tap its capability on ESG to create a new product line for CTOS' client base.

Expand into new verticals

CTOS' management intends to focus on real estate, automotive and insurance sectors to further expand its customer base. Management believes that these sectors are the most underserved and projections in IDC's study show that the addressable market for these sectors is expected to grow at a rapid pace (Figure 62). For each of these three sectors, the potential revenue generating opportunities could come from the following:

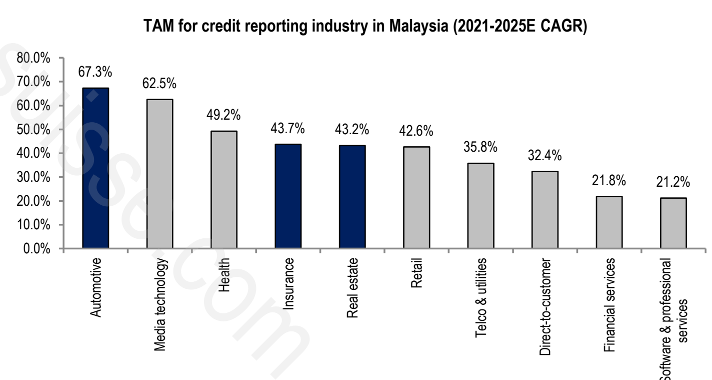
- **Real estate:** The addressable market for real estate is expected to grow at a 34.2% CAGR over 2016-25. CTOS is the only CRA offering tenant screening. There is undoubtedly plenty of supply with vacancy rates of commercial and retail property at multi-year highs. However, once mobility trends improve as vaccine rollout plans are successfully completed, there is scope for rental demand to recover. In a recovery phase, we can foresee a pick-up in demand for CTOS' tenant screening product. Also the pick-up in demand for residential property could lead to more demand for credit screening and background checks on prospective buyers.
- **Automotive:** The addressable market for the automotive sector is expected to grow at the highest rate of 44.7% p.a. CAGR over 2016-25. Automotive sales have been robust, thanks to the tax incentives offered by the government. There is plenty of scope for CTOS to generate revenue from this sector. Potential sources of revenue could come from: (1) strong sales and loan growth, (2) real-time credit decision-making on auto purchases, and (3) data analytics to predict credit default among borrowers, (4) introduction of new rating system for used vehicles to enable buyers/HP borrowers and banks to gauge the quality as well as history of the vehicles at point of purchase.
- **Insurance:** The addressable market for insurance is expected to grow at a 30.5% CAGR over 2016-25. Data analytics to link driver statistics and behavioural patterns with claims experience can help insurance companies in pricing of their products.

Figure 62: Growth by sector



Source: IDC Malaysia Analysis

Figure 63: Total addressable market for credit reporting services by industry (2021-25E CAGR)

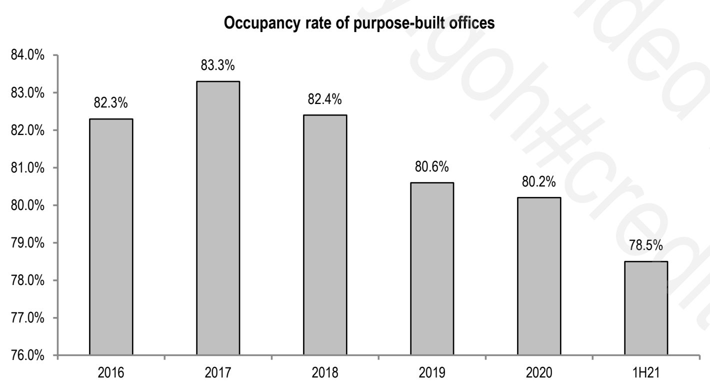


Source: IDC Malaysia Analysis

Figure 64: Auto loans growth continues to recover

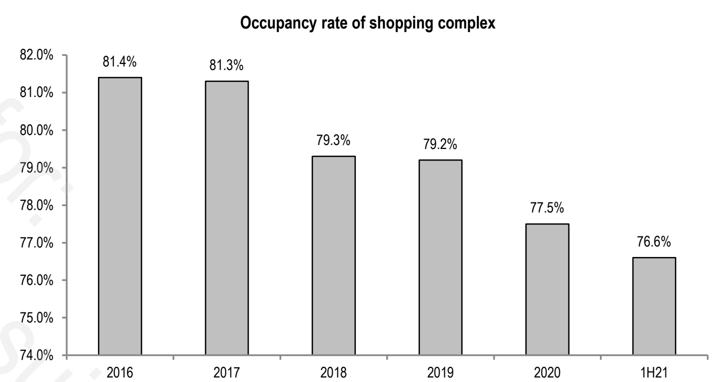
Source: BNM

Figure 65: Occupancy rates of offices



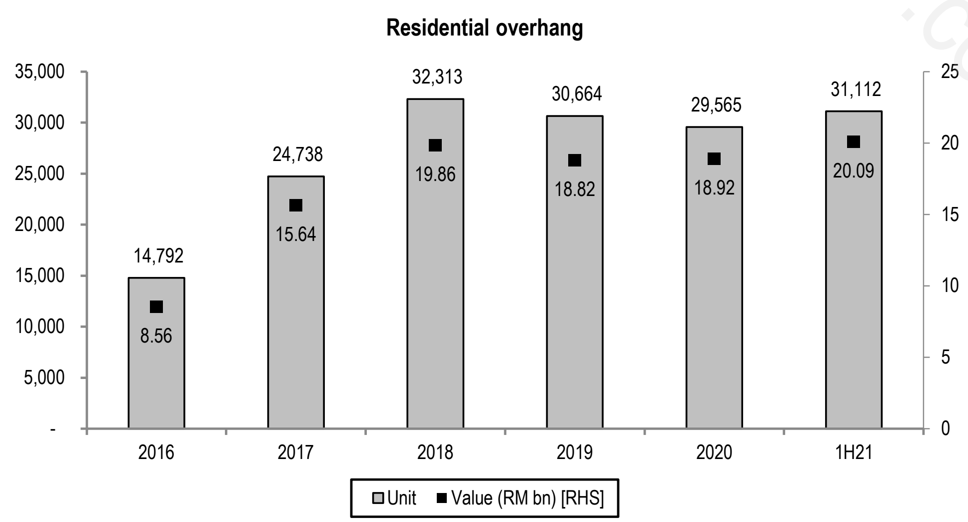
Source: Napic

Figure 66: Occupancy rates of shopping complex



Source: Napic

Figure 67: Residential property overhang



Source: Napic

Selectively pursue acquisitions to expand presence

To further supplement earnings growth from the core Malaysian CRA business, management has been making acquisitions and intends to continue to explore opportunities to expand its overseas portfolio. It was stated in the prospectus that management has identified a target business in the Asia Pacific region, but that the acquisition plan is still in a preliminary discussion phase.

Past transactions in the last two years:

- **Experian**: In July 2019, CTOS acquired 26% of Experian for RM56.2 mn, which was funded through bank borrowings.
- **CIBI:** In June 2020, acquired 51.0% of CIBI for a total cash consideration of P174.9 mn (RM15.0 mn), which was funded through bank borrowings. In early 2021, CTOS completed the distribution in specie to exclude CIBI from CTOS.
- **BOL:** In October 2020, acquired 20.0% equity interest in BOL for a cash consideration of Bt689.2 mn (which was paid in USD equivalent of US$22.1 mn or equivalent to ~RM91.9 mn computed based on US$1/RM4.1645), which was funded through bank borrowings. This has been the most successful acquisition so far as the market value of its BOL stake is now more than double its acquisition cost. On 6 August 2021, CTOS purchased an additional 21.7 mn shares, or 2.65% of BOL, for RM26.8 mn to raise its effective stake to 22.65%. The cost of its latest tranche of shares is 120% above the original price paid for its earlier 20% stake. BOL's market capitalisation has also appreciated >160% since CTOS first bought into the company. CS initiates coverage of BOL with a target price of Bt15.40 (vs CTOS' average cost of Bt4.83).
- **Basis:** In January 2021, CTOS acquired the entire equity interest of Basis for an upfront purchase consideration of RM32.0 mn and an earn-out payment of RM8 mn that is computed based on a revenue target and payable by March 2023.
- **RAM** : On 29 July 2021, CTOS purchased a 4.625% stake in RAM Holdings Bhd from CIMB for RM10.05 mn. RAM is a leading provider of independent credit ratings, research, training, risk analysis, environmental, social and governance (ESG) analytics and bond pricing and valuation data. RAM was incorporated in 1990 as a catalyst for the domestic debt-capital market and Malaysia's first credit rating agency. RAM's rating portfolio encompasses a vast range of local and foreign corporates, multinationals, banks, insurance companies, government-linked and other public-financed entities. In 2020, RAM generated revenue of RM40.0 mn and profit after tax of RM8.4 mn. RAM has total assets of RM188.0 mn and has net assets of RM167.2 mn. The transacted price translates to 25.9x 2020 P/E and 1.3x P/NAV. We believe that CTOS would be interested to further raise its stake in RAM if there are willing sellers. We understand that the regulatory shareholding limit for each shareholder is 20%. The acquisition allows CTOS to tap into the database and expertise of RAM, which is synergistic with the former's operations. We understand that management of CTOS also sees opportunity to work closely with RAM to develop a bond market for SMEs and broaden the application of ESG-related products.

So far, with the exception of CIBI, the other acquisitions appear to be value-accretive and synergistic with the group's core business. Even in the case of CIBI it is somewhat debatable if the acquisition is deemed to be value destructive given the promising growth prospects for the Philippines' credit reporting market. We would not discount the possibility of the group buying back CIBI though it has to be handled with care given the vendors would be deemed related parties. CTOS has first right of refusal to buy CIBI should the shareholders who received the shares in CIBI decide to divest their stake.

The associates purchased by CTOS (total purchase consideration of RM148 mn) only contributed RM1.8 mn to net profit in 2020 (or 3.9% of core net profit). However, there is scope for this to improve judging from the robust growth achieved by Experian and BOL in 2020. In 1H 2021, CTOS already registered a sharp increase in associate profit contribution to RM3.4 mn (vs RM0.5 mn in 1H20 and RM1.8 mn for full-year 2020). Barring any further acquisitions, we estimate that associate profit contributions could potentially rise to RM22 mn or 9% of CTOS' net profit by 2025.

Initiate coverage with OUTPERFORM

We initiate coverage on CTOS with an OUTPERFORM rating and a 12-month TP (based on DCF method) of RM2.50/sh. The stock trades on 2022E P/E of 43x and 2023E P/E of 29x. While CTOS is trading at a premium to global peers' average 2022E P/E of 30x, we believe the valuation premium can be justified by its superior net profit growth potential (estimate two-year CAGR of 48% vs peer average of 10% p.a.) and stronger balance sheet (net cash post-IPO vs average net gearing ratio of 1x for comparable peers). CTOS' P/E-to-growth multiple of 1.4x compares favorably to peer average of 3.0x. In our view, potential catalysts that can re-rate the stock are:

1. **Confirmation of the renewal of its pioneer status for another 5 years (2021-2026)**. Management expects to receive confirmation of the renewal of its pioneer status within a month.
2. **Synergistic acquisitions that could add operational value through creation of new product lines and cross fertilisation of client base.** Acquisitions such as its recent top-up of its stake in BOL and minority stake in RAM have been viewed positively. Should CTOS further increase its stake in RAM, we believe it would be viewed favourably by investors.
3. **Favourable data points to strengthen investors' confidence in its ability to rapidly grow its client base**. So far growth in key account and DTC revenues have surpassed historical growth trends and consensus expectations. With the re-opening of the economy, we believe there is scope for commercial revenue growth to gather momentum to fuel investors' confidence in its overall growth prospects.
4. **Speedy restoration of its access to Malaysia's credit bureau data (CCRIS) following a recent temporary suspension of access due to concerns over cyber threats.** According to management, the temporary suspension of all CRAs access to CCRIS by Bank Negara (BNM) is a precautionary measure due to credible threats on the dark web that CRAs could be a target of hackers. Feedback from our recent discussion with management suggests that CTOS' data assets have not been breached and stressed that the group's data security framework, policies, procedures and systems are benchmarked against BNM's Risk Management in Technology standard. Management is due to submit a report to BNM very soon and expects to restore its access to CCRIS in the near future. In the meantime, CTOS can still proceed with services that do not require CCRIS access and does not foresee a material impact to its earnings if the matter is resolved soon. CTOS has also offered a one month free access to its fraud protection product that enables dark web monitoring and has so far attracted 2,300 users within a few hours of its launch.

Discounted cash flow method

In our opinion, a discounted cash flow valuation is the most appropriate method to estimate the "fair value" of CTOS given the highly cash-generative nature of the business and the low credit-reporting revenue penetration which suggests there is still plenty of headroom to enable the group to sustain a heathy pace of long-term earnings/cash flow growth.

Looking at peers with a similar nature of business in more mature markets such as Equifax, Dun and Bradstreet and Experian, we find that their beta ranges from 0.84x to 1.11x (Dun and Bradstreet 0.87, Experian 0.97, Equifax 1.11). Based on a risk-free rate of 3.7% (ten-year Malaysian Government Securities yield), market risk premium of 6.1% (consistent with the premium adopted by CS' strategy team) and average beta for peers of 0.98x, the WACC (weighted average cost of capital) is estimated to be 7.7% based on an assumed equity-to-debt mix of 67%:33% (assuming management has the appetite to gear up to 2x-3x EBITDA). Using a DCF approach with terminal value assumption of 4% p.a. (assuming a slowdown in economic growth in Malaysia from the 5-6% projected for 2022), we derive a DCF valuation of RM5.47 bn. At this estimated value, the implied 2022E P/E and 2023E P/E for CTOS would be 57x and 39x, respectively.

CS' target prices for comparable peers translate to an average 2022E P/E of 38x and 2022E P/FCF of 33x. We believe CTOS can command a valuation premium over peers for the following reasons:

- Superior net profit growth potential (estimated two-year CAGR of 48% vs peer average of 10% p.a.) given it operates in markets such as Malaysia and Thailand that are underserved by CRAs.
- Stronger balance sheet (net cash post-IPO vs average net gearing ratio of 1x for comparable peers).
- Provides unique new economy exposure that is very rare within the Malaysian market.
- As a Shariah-compliant stock, CTOS offers a rare Shariah-compliant exposure to the growth opportunities in the financial services sector.

Figure 68: Sensitivity analysis (RM mn, firm value)

RM mn	Terminal growth (%)		
Discount rate	**3%**	**4%**	**5%**
8.7%	3,701	4,328	5,293
8.2%	4,049	4,832	6,104
7.7%	4,472	**5,473**	7,214
7.2%	4,996	6,315	8,829
6.7%	5,662	7,469	11,391

Source: Credit Suisse estimates

Figure 69: Sensitivity analysis (RM, value/sh)

RM	Terminal growth (%)		
Discount rate	**3%**	**4%**	**5%**
8.7%	1.68	1.97	2.41
8.2%	1.84	2.20	2.77
7.7%	2.03	**2.49**	3.28
7.2%	2.27	2.87	4.01
6.7%	2.57	3.40	5.18

Source: Credit Suisse estimates

Figure 70: Peer average valuation multiples (based on CS' price targets)

	Peer avg at CS' price targets (x)				
Companies	**2022 P/CF (x)**	**2022 P/E (x)**	**2023 P/CF (x)**	**2023 P/E (x)**	**Net gearing (x) [2022]**
Experian	35.4	37.4	32.0	33.2	1.1
D&B	40.1	29.0	34.3	26.6	0.8
Equifax	35.5	41.7	29.2	35.4	0.7
Peer avg #	**36.1**	**38.2**	**31.3**	**33.4**	**0.9**

Source: Credit Suisse estimates. # at CS' price targets for peers (Experian, Dun and Bradstreet, Equifax).

Figure 71: Equity value range based on varying discount rates with implied valuation multiples vs peer average

	Terminal growth = 4%			Premium/ (discount) to peer avg (%) #		P/E-to-growth (x)
Discount rate	**Equity value**	**2022 P/CF (x)**	**2022 P/E (x)**	**2022 P/CF (x)**	**2022 P/E (x)**	**CTOS**
8.7%	4,328	59.6	45.0	65%	18%	1.34
8.2%	4,832	66.5	50.3	84%	32%	1.49
7.7%	5,473	75.4	56.9	108%	49%	1.69
7.2%	6,315	87.0	65.7	141%	72%	1.95
6.7%	7,469	102.8	77.7	185%	103%	2.31
Peer average#		**36.1**	**38.2**			**2.29**

Source: Credit Suisse estimates. #At CS' price targets for peers (Experian, Dun and Bradstreet, Equifax).

Cross reference with P/E and P/FCF of peers

As a sanity check for our DCF valuation, we look at the existing P/E and P/FCF valuation multiples for peers. Currently the entire peer group trades on an average 2022E P/E and 2023E P/E of 30x and 25x, respectively. On P/CF, the peer average valuation for 2022E and 2023E are 29x and 25x, respectively. On average, peers' net profit is projected to grow at a rate of 10% p.a. over the next two years compared to 48% p.a. for CTOS. As such, the peer average P/E-to-growth currently stands at 3.0x compared to 1.5x for CTOS.

Figure 72: Peer comparison

	Ticker	Rating	Current price	TP (LC)	Upside/ (downside)	P/E			P/FCF			Net gearing (x)		EPS	P/E-to-
						2021C	**2022C**	**2023C**	**2021C**	**2022C**	**2023C**	**2021C**	**2022C**	**2-yr CAGR**	**growth (x)**
BOL	BOL TB	O	11.00	15.4	40.0%	38.4	30.0	23.5	50.3	28.9	23.8	(0.4)	(0.4)	27.9%	1.4
CTOS	CTOS MK	O	1.87	2.5	33.7%	64.5	42.8	29.4	73.2	56.6	32.4	(0.1)	(0.1)	48.2%	1.4
Experian	EXPN LN	O	30.56	33.5	9.6%	35.1	30.8	27.6	35.3	32.3	29.2	1.2	1.1	12.8%	3.0
D&B	DNB US	O	17.89	33.0	84.5%	17.1	15.6	14.3	31.5	21.7	18.6	0.9	0.8	9.2%	1.9
Equifax	EFX US	O	253.40	300.0	18.4%	34.5	29.6	26.4	63.4	30.0	24.7	1.0	0.7	14.3%	2.8
Trans Union	TRU US	N	112.95	125.0	10.7%	31.0	28.3	26.2	27.3	26.9	26.5	0.7	0.4	8.7%	4.0
Moody's	MCO US	O	349.73	425.0	21.5%	29.9	28.1	25.6	28.9	25.8	24.7	3.1	2.7	8.0%	3.1
Verisk	VRSK US	N	198.81	185.0	-6.9%	38.6	34.0	30.8	37.3	31.9	29.0	1.0	0.9	11.9%	3.7
FactSet	FDS US	N	396.61	395.0	-0.4%	34.4	31.7		30.5	30.0		(0.1)	(0.2)		
Average						**32.8**	**29.5**	**24.7**	**36.5**	**28.8**	**24.4**	**1.6**	**1.3**	**9.9%**	**3.0**

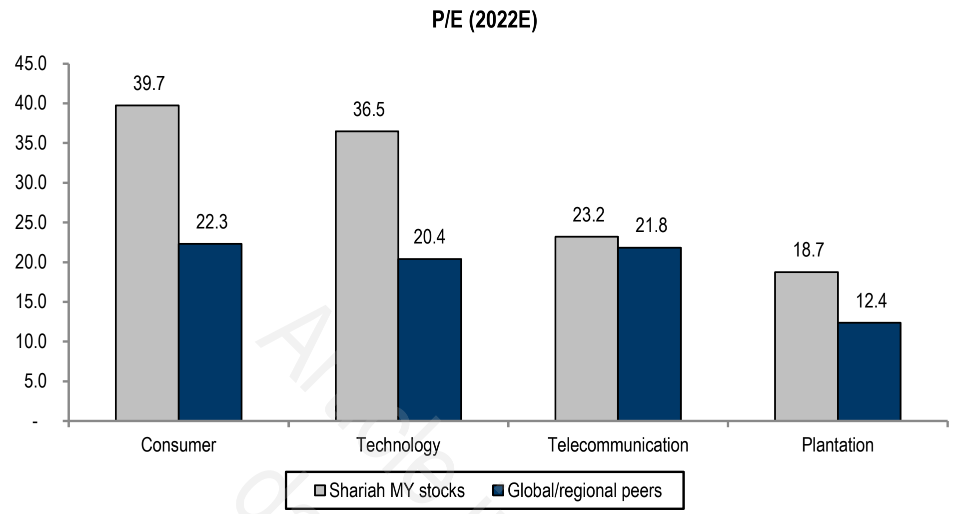
Source: Company data, Credit Suisse estimates

Rare Shariah-compliant proxy for financials sector

CTOS has been classified as a Shariah-compliant company on the Bursa exchange. We understand that the Shariah status is conditional on CTOS using the proceeds from the cash injection to retire its non-Islamic borrowings. Given that most banks in Malaysia are not Shariah-compliant, CTOS would offer a rare Shariah-compliant exposure to the growth opportunities in the financial services sector. Looking at the Shariah-approved stock universe, financial services makes up only 1% of the entire universe. This compares with the financial services composition in the KLCI of 30%. As such, this could be an important consideration in the valuation of CTOS given that Malaysian Islamic funds could form a large pool of interested investors for the stock.

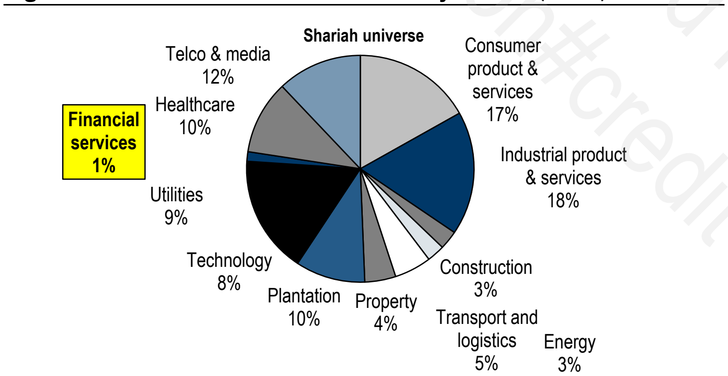
In addition, it is worth highlighting that Shariah-compliant Malaysian stocks across sectors such as consumer, technology, telecommunication and plantation trade at a material premium to other regional/global peers.

Figure 73: Shariah-compliant stocks in Malaysia trades at a premium to global peers



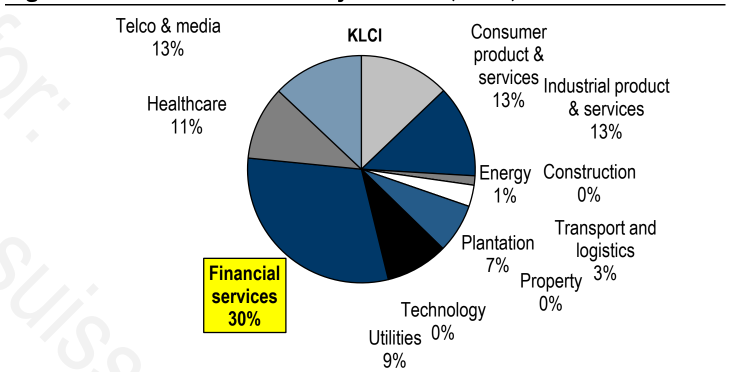
Source: IBES estimates, Credit Suisse estimates

Figure 74: Shariah stock distribution by sector (2021)



Source: Securities Commission

Figure 75: KLCI distribution by sectors (2021)



Source: Bursa

Key risks

Regulatory risk

CTOS derives its revenue from the credit reporting business in Malaysia which is governed by the CRA Act. Pursuant to the CRA Act, CTOS Digital is required to have a CRA Certificate issued by the CRA Registrar to operate the credit reporting business. The two CRA Certificates, held under CTOS Data Systems and Basis, will expire in September 2021 and failure to renew would negatively impact CTOS' business. Apart from the CRA Act, CTOS' Malaysian business is also subjected to the rules and regulations under the Personal Data Protection Act (PDPA), while the operations of BOL are subjected to the Thai PDPA. Given its leading position in Malaysia, CTOS may also be subjected to increased regulatory scrutiny under the Competition Act.

Loss of access to key external data sources

CTOS' business operations depend highly on it having continued access to data from external sources, including data obtained from its customers, strategic partners and various government and public record repositories such as the CCRIS and CCM in Malaysia, as well as the Thai DBD and the Thai LED in Thailand. Should CTOS Digital lose access or it is no longer able to obtain such external data sources, this would negatively impact its ability to provide digital solutions. Also at the moment, only three CRAs (namely CTOS, Experian, CBM) have been granted approval to access CCRIS' database. Should more parties be granted similar access, it would lead to more competition. Public and commercial sources of free or relatively inexpensive consumer information may become more readily available over time, and could potentially result in a drop in demand for CTOS' digital solutions product. Governmental agencies could also choose to provide free credit information to consumers. As an example, BNM's initiative to provide free access to its CCRIS database from Jun-2020 until Dec-2021 adversely impacted CTOS' revenue from sale of its CTOS Data Systems Reports in FY20 and is expected to continue to have the same effect through to the end of 2021.

Management risk

CTOS operates in a highly specialised industry which is underpenetrated in ASEAN. Hence there is a shortage of talent in Malaysia given that the business requires unique experience and skill sets. Hence any loss of key management team members with extensive industry experience could be a setback for CTOS.

Acquisition risk

CTOS plans to actively seek opportunities to expand geographically to some of these countries. It was stated in the prospectus that management has identified a target business in the Asia Pacific region but such an acquisition plan is still in a preliminary discussion phase. While acquisitions could present avenues to grow, there is also risk that investors might not be comfortable with the valuation and/or financial viability of these acquisitions.

Data integrity

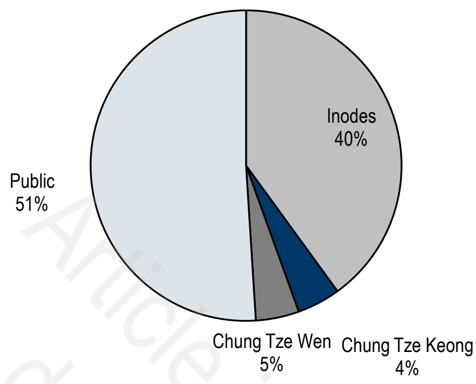
Data integrity and reliability of CTOS' information database is critical to its reputation and consequently financial performance. If CTOS' information database has been compromised or the quality of its databases has decreased, it will not only face reputational damage but could be subjected to claims from customers or third-parties as well as enforcement actions from regulators.

Failure to maintain pioneer status could result in loss of tax incentives

CTOS' subsidiary, CTOS Data Systems, which accounts for the majority of the group's PATAMI (FY20 95.1%) has been awarded pioneer status incentives under the PIA 1986 for MSC Malaysia Qualifying Activities. CTOS Data Systems is entitled to a tax exemption for the tax relief period granted on its "value added income" which resulted in CTOS's effective tax rate being significantly lower than the statutory tax rate of 24.0% in Malaysia (effective tax rate for FY20 5.8%). Furthermore, should CTOS Data Systems lose its MSC Malaysia Status, this would also result in the loss of CTOS Data Systems' pioneer status. Management believes that CTOS Data Systems' pioneer status will be renewed in 2021 (for an additional five-year period).

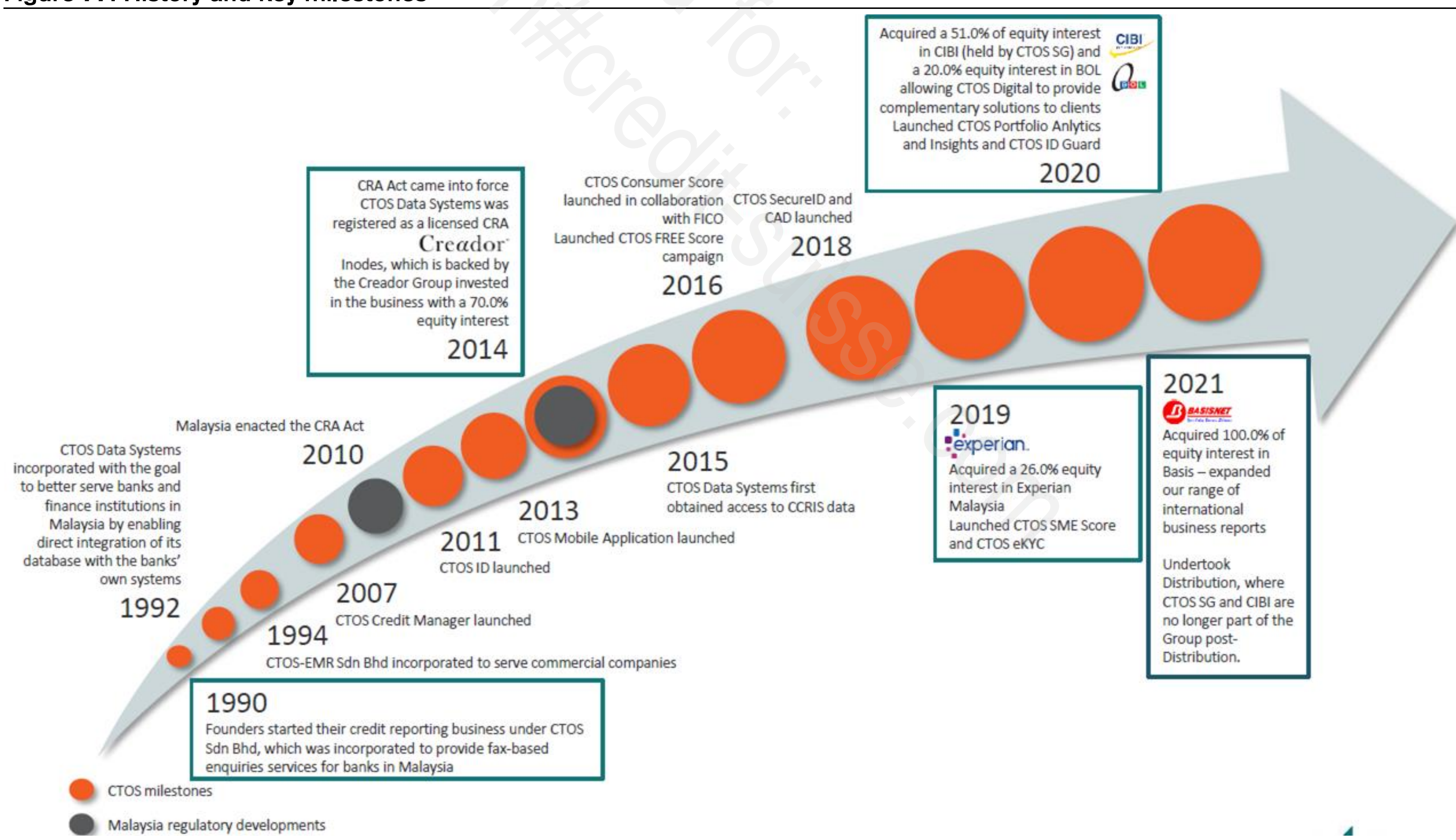
Appendix I: History and key milestones

Figure 76: Shareholding structure



Source: Company data

Figure 77: History and key milestones



Source: Company data

Appendix II: Management team

Dennis Colin Martin, Non-independent Executive Director/Group CEO

Dennis Martin joined CTOS Digital in March 2017 as Group CEO and was subsequently appointed to the board on 1 November 2020. Mr Martin has over 20 years of experience in the credit report industry and 16 years of experience in the banking sector. Prior to joining CTOS Digital, Martin served as the owner and principal consultant of MicDan Consulting, a sole proprietorship. He has also held various senior management positions at regional and international credit bureaus. Martin was the MD of Dun & Bradstreet (New Zealand) Ltd from Feb-2014 to Dec-2015, GM at CoreLogic (New Zealand) Ltd, helmed the APAC operations of Experian, amongst others.

Eric Chin Kuan Weng, CEO, CTOS Data Systems

Eric Chin is the CEO of CTOS Data Systems and joined the group in November 2014. He has over 25 years of experience at the helm of senior leadership roles in business, sales and operational functions for multinationals and local corporates. Since joining CTOS Digital in 2014, Eric Chin has been involved in the management of key accounts customers and acting as their key liaison with regulators. Prior to his role at CTOS Data Systems, Eric Chin was the COO of Credit Bureau Malaysia from November 2008 to September 2014.

Garris Chen Thai Foong, Group CFO

Garris Chen joined CTOS Digital as the CFO of CTOS Data Systems in April 2016 and subsequently she was designated as the Group CFO of CTOS Digital in April 2021. Garris Chen has over 32 years of experience in finance and treasury and was most recently the Group CFO of Taylor's Education Group prior to joining CTOS Data Systems. She has also held various senior management positions at Lafarge Malaysia, DHL Asia Pacific Shared Services and MOX Berhad, amongst others.

Tracy Gan Jo Lin, COO, CTOS Data Systems

Tracy Gan joined the group in May 2017 as the General Manager in customer experience and was subsequently promoted to her current role of COO in January 2019. Tracy Gan currently oversees the strategic operations and customer experience for CTOS Data Systems. She has over 23 years of experience in operations and was the head of distributor and modern trade management at Maxis before joining CTOS Data Systems.

Appendix III: Details of key digital solutions

Figure 78: Key digital solutions

Key Digital Solutions	CTOS Scores	CTOS Credit Manager	CTOS Basis (formerly BASISNET)	Comprehensive Portfolio Review
Application	Three-digit numbers that represent an analytical assessment of the credit health of a consumer or business via CTOS Consumer Score and CTOS SME Score	Our SaaS online credit risk management platform for customers to search, store, monitor and manage their own customers' and related business parties' credit and other information	Access Basis international credit and local comprehensive reports, litigation check, credit monitoring services and Business Listings	Perform comprehensive reviews of our customers' portfolios of end-customer data to provide them with more information about their own customer bases
Customer Type	Key Accounts, Commercial customers and Consumers	Commercial customers	Commercial customers	Key Accounts and Commercial customers
Revenue Model	CTOS Consumer Score and CTOS SME Score are sold both as part of our CTOS Reports and individually	▪ Subscription fee, which can be paid monthly or annually ▪ On a transactional basis for digital solutions purchased through CTOS Credit Manager	Subscription fee on an annual basis, or prepaid packages	A one-time fee for each review, which varies based on the nature of the review
Key Digital Solutions	**Portfolio Analytics and Insights**	**CAD**	**CTOS eKYC**	**Reports**
Application	Customised analytics and insights to customers based on a combination of a customer's portfolio data and our own comprehensive databases	Our SaaS solution that automates a customer's credit assessment process using analytics and insights from our proprietary information databases	Digital onboarding solution that provides banks and businesses with digital identity verification via a four-layer authentication process, which is compliant with all applicable regulatory standards	Produce reports that leverage our insights, solutions and information from our databases, and sell external reports produced by third parties
Customer Type	Key Accounts and larger SMEs in our Commercial Customers	Banks and corporates in both our Key Accounts and Commercial Customers	Key Accounts and Commercial customers	Malaysian and International consumers and businesses
Revenue Model	A one-time fee for each project, which varies based on the nature of the project	CAD is available as a cloud-based service or on-premises application. Customers pay a transactional fee and a one-time set-up fee	Either monthly subscription fees and/or transactional fees and a one-time set-up / implementation service	On a transactional basis
Key Digital Solutions	**CTOS IDGuard**	**CTOS SecureID**	**CTOS CreditFinder**	**eTR and eTR Plus**
Application	Proprietary fraud bureau, offering a data sharing platform to detect and prevent application fraud	Consumer fraud protection and credit monitoring SaaS solution. CTOS SecureID subscribers receive real-time alerts on suspicious activity and potential information data breaches affecting their accounts	Online matching and referral platform where lenders can list their financial products such as credit cards, home loans or personal loans	▪ eTR database contains electronic trade references which contain non-bank negative payment behaviour information on Malaysian individuals and businesses ▪ eTR Plus database also contains non-bank positive and negative payment behaviour information on Malaysian individuals and businesses
Customer Type	Key Accounts customers, particularly in the banking sector	Consumers	Consumers	Non-bank customers in Key Accounts and Commercial customers
Revenue Model	Subscription fee, paid annually	Subscription fee, which can be paid monthly or annually	Monthly subscription fee and marketing fees	Monthly fee

Source: Company data

Appendix IV: Key financial data

Figure 79: Summary of income statement

December (RM' mn)	2018	2019	2020	2021F	2022F	2023F
Revenue	**110.5**	**129.1**	**140.5**	**162.8**	**206.2**	**258.7**
Cost of sales	(17.5)	(21.6)	(19.1)	(20.9)	(29.2)	(33.6)
Gross profit	**92.9**	**107.5**	**121.4**	**141.9**	**177.0**	**225.0**
Other operating income	0.2	0.1	0.2	0.9	1.5	2.5
Selling and marketing exp	(25.5)	(27.8)	(33.9)	(36.5)	(39.7)	(43.0)
Admin exp	(32.3)	(31.8)	(37.5)	(38.4)	(41.0)	(43.6)
EBITDA	**35.3**	**48.0**	**50.3**	**68.0**	**97.8**	**140.9**
Depreciation	(3.4)	(6.3)	(7.5)	(7.0)	(7.3)	(7.7)
EBIT	**31.9**	**41.7**	**42.8**	**61.0**	**90.5**	**133.2**
Finance costs	(0.1)	(1.2)	(4.2)	(3.2)	(1.0)	(0.3)
Share of JV and associate	-	0.8	1.8	9.4	12.0	15.1
PBT	**31.8**	**41.2**	**40.3**	**67.2**	**101.5**	**148.0**
PAT	**29.7**	**39.0**	**38.0**	**63.8**	**96.1**	**140.0**
PATAMI	**29.7**	**39.0**	**39.2**	**63.8**	**96.1**	**140.0**
Normalised PATAMI	**30.5**	**42.1**	**45.5**	**63.8**	**96.1**	**140.0**

Source: Company data, Credit Suisse estimates

Figure 80: Summary of key assumptions and ratios

	2020	2021F	2022F	2023F
Revenue (RM' mn)	**140.5**	**162.8**	**206.2**	**258.7**
Key accounts (RM' mn)	47.3	55.3	62.4	69.8
Commercial (RM' mn)	79.6	96.9	126.6	163.3
Direct-to-customer (RM' mn)	6.3	10.6	17.1	25.6
ARPU				
Key accounts (RM)	110,081	122,793	130,080	136,781
Commercial (RM)	4,682	4,682	5,010	5,361
Direct-to-customer (RM)	4.8	6.3	7.2	7.7
Number of users				
Key accounts	430	450	480	510
Commercial	17,000	20,699	25,272	30,456
Direct-to-customer	1.3	1.7	2.4	3.3
Ratios (%)				
Gross profit margin	86.4%	87.2%	85.8%	87.0%
EBITDA margin	35.8%	41.8%	47.5%	54.5%
Core net profit margin	32.4%	39.2%	46.6%	54.1%
ROE	41.3%	31.2%	30.3%	38.4%
ROA	18.7%	19.6%	24.0%	30.0%
Net gearing	0.96	(0.08)	(0.09)	(0.19)

Source: Company data, Credit Suisse estimates

Figure 81: Summary of balance sheet

Balance sheet	2018	2019	2020	2021F	2022F	2023F
Fixed Assets	17.5	19.7	19.0	21.2	24.8	28.5
Long-term investments	-	56.9	150.8	192.4	198.4	205.9
Intangible assets	38.0	38.0	50.7	80.9	90.5	92.2
Cash	10.2	6.1	26.4	55.2	77.8	136.4
Other liquid assets	-	-	0.9	0.9	0.9	0.9
Non-cash assets	22.9	21.5	28.2	25.0	33.9	42.5
Current borrowings	5.9	18.2	132.3	31.4	47.1	62.7
Other current liabilities	16.6	33.7	27.1	35.9	32.5	41.0
Net Assets	**66.2**	**90.3**	**116.5**	**308.3**	**346.7**	**402.7**
Long-term debt	5.7	9.4	-	-	-	-
Other LT liabilities	0.5	1.9	0.8	9.9	9.9	9.9
Issued share capital	198.0	198.0	198.0	418.0	418.0	418.0
Reserves (incl share premium)	(192.2)	(190.6)	(193.3)	(192.9)	(192.9)	(192.9)
Retained earnings	54.3	71.5	106.0	73.2	111.7	167.7
Minority interests	-	-	5.0	-	-	-
Capital Employed	**66.2**	**90.3**	**116.5**	**308.3**	**346.7**	**402.7**

Source: Company data, Credit Suisse estimates

Figure 82: Summary of cash flow statement

December (RM' mn)	2018	2019	2020	2021F	2022F	2023F
PBT	31.8	41.2	40.3	67.2	101.5	148.0
Adjustments	4.0	8.6	10.5	2.3	1.3	0.1
	35.8	49.9	50.8	69.5	102.8	148.1
Cash generated from operations	**39.5**	**46.1**	**51.5**	**71.2**	**89.6**	**146.7**
Tax paid	(2.7)	(2.5)	(2.1)	(2.9)	(4.4)	(6.7)
Net cash from operation	**37.5**	**48.8**	**49.6**	**68.3**	**85.2**	**140.0**
Capex	(10.1)	(2.8)	(6.9)	(12.1)	(12.5)	(13.1)
Free cashflow	**27.4**	**46.0**	**42.7**	**56.2**	**72.6**	**126.9**
Investing inflow	0.0	0.0	0.1	220.0		
Investing outflow	-	(56.2)	(97.3)	(85.9)	(8.0)	
Pre-financing cashflow	**27.4**	**(10.2)**	**(54.4)**	**190.3**	**64.6**	**126.9**
Restricted cash for term loan	-	(0.6)	(0.8)			
Dividends paid	(35.0)	(21.7)	(10.5)	(60.5)	(57.7)	(84.0)
Drawdown of borrowings	11.7	32.0	193.6	31.4		
Repayment of borrowings	-	(16.2)	(86.2)	(132.3)	15.69	15.69
Payment of lease liabilities	-	(1.7)	(1.8)			
Transaction cost paid	(0.3)	-	(3.0)			
Interest paid	(0.0)	(0.7)	(2.8)			
Advances from immediate holding coy	-	56.3	-			
Repayment of advances from hol coy	-	(42.0)	(14.3)			
Net increase/(decrease) in cash	**3.8**	**(4.7)**	**19.7**	**28.8**	**22.6**	**58.5**

Source: Company data, Credit Suisse estimates

Valuation Methodology and Risks

Target Price and Rating
Valuation Methodology and Risks: (12 months) for CTOS Digital (CTOS.KL)

Method: We have used a DCF (discounted cash flow) methodology to value CTOS, premised on a 7.7% WACC (weighted average cost of capital) and 4% terminal growth rate. Our OUTPERFORM rating and RM2.50 target price is premised on CTOS's leading market positioning in Malaysia coupled with its wide sustainable moat which makes it a prime beneficiary to capitalize on the promising growth prospects in the Malaysia credit reporting industry.

Risk: Key risks to our RM2.50 and OUTPERFORM rating: (1) (1) regulatory risk that could lead to loss of CRA Certificate, (2) access to data resources, (3) acquisition risk, (4) management risk, (5) data integrity, and (6) CTOS' ability to maintain its pioneer status which has tax implications.

Companies Mentioned *(Price as of 05-Oct-2021)*
Alliance Bank Malaysia Berhad (ALLI.KL, RM2.57)
AmBank (AMMB.KL, RM3.13)
Axiata Group Berhad (AXIA.KL, RM3.92)
Business Online (BOLm.BK, Bt10.3)
CIMB Group Holdings Bhd (CIMB.KL, RM4.72)
CTOS Digital (CTOS.KL, RM1.9, OUTPERFORM[V], TP RM2.5)
DBS Group Holdings Ltd (DBSM.SI, S$30.23)
Dun & Bradstreet Holdings (DNB.N, $17.89)
Equifax (EFX.N, $253.4)
Experian (EXPN.L, 3056.0p)
FactSet Research Systems (FDS.N, $396.61)
Hong Leong Bank (HLBB.KL, RM18.74)
Kasikornbank (KBANK.BK, Bt137.5)
Kasikornbank (KBANKf.BK, Bt136.5)
Malayan Banking (MBBM.KL, RM8.01)
Moody's (MCO.N, $349.73)
PT Bank Central Asia Tbk (BBCA.JK, Rp34,725)
PT Bank Rakyat Indonesia (Persero) Tbk (BBRI.JK, Rp3,930)
Public Bank (PUBM.KL, RM4.06)
Sea Limited (SE.N, $317.9)
Siam Commercial Bank (SCB.BK, Bt123.0)
Sunway (SWAY.KL, RM1.71)
TransUnion (TRU.N, $112.95)
Verisk Analytics (VRSK.OQ, $198.81)

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Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.
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