

Hong Kong

ADD (initiation)

Consensus ratings*: Buy 3 Hold 0 Sell 0

Current price:	HK\$6.54
Target price:	HK\$10.35
Previous target:	N/A
Up/downside:	58.3%
CGS-CIMB / Consensus:	-17.2%
Reuters:	3600.HK
Bloomberg:	3600 HK
Market cap:	US\$804.8m
	HK\$6,258m
Average daily turnover:	US\$5.27m
	HK\$41.06m
Current shares o/s:	956.9m
Free float:	34.1%

*Source: Bloomberg

Key changes in this note

N/A



Source: Bloomberg

Price performance	1M	3M	12M
Absolute (%)	-13	-8.8	388.1
Relative (%)	-20.4	-4.4	383

Major shareholders	% held
Chan Family	49.4
Ngai Family	16.5
Management and others	4.1

Analyst



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Modern Dental Group Ltd

Dentistry digitalisation revolution

- MDG has been growing rapidly in the past 10 years through M&A to become one of the key mid-stream players in the global dental prosthetic industry.
- We expect MDG to benefit from the consolidation and digitalisation trend in the industry supported by its enviable portfolio and solid distribution network.
- Initiate coverage with an Add and TP of HK\$10.35 based on 16x CY22F P/E.

MDG is key mid-stream player in the global dental prosthetic market

Modern Dental Group (MDG) is one of the world's largest mid-stream players in the dental prosthetic market. MDG has expanded significantly via M&A over the past 10 years to grow its global distribution network and has established high entry barriers for new entrants through its reputable brand portfolio and solid distribution network. We believe MDG will benefit from the accelerated consolidation and digitalisation trend in the global dental prosthetic industry due to its substantial cost advantage vs. rivals, high-quality products, product delivery efficiency, & one-stop shop capability in innovative digital solution cases.

Benefitting from global dental prosthetic market consolidation...

Amid the largely stable demand for dental services between 2019 and 1H21, we believe MDG successfully gained significant market share globally, especially at the height of the Covid-19 pandemic in 2H20 and 1H21 when many small-sized labs shuttered. These gains are clearly reflected in MDG's fast revenue growth and record-high net profits (NP) in 2H20 (revenue +7% yoy, NP at HK\$247m) and 1H21 (revenue +65% yoy, NP at HK\$240m).

...and rising digitalisation trend in dentistry

The dental prosthetic market has entered a digitalisation era which is illustrated by the mass adoption of intraoral scanners and 3D printing, falling intraoral scanner prices, and popularity of clear aligners. Supported by MDG's extensive geographical coverage and advanced digital solutions, we expect digital solution penetration to grow rapidly from c.7% of total output in FY20 to c.35% in FY23F, thus becoming the key net profit driver.

China market, clear aligners: potential growth engines

On the back of a relatively low digital dental care penetration rate in China (c.10% in China vs. 40% in the US) and rising awareness of oral health, we believe MDG is in a good position to capture the fast-growing demand for digital dental services due to its innovative digital solutions technology and premium dental prosthetic products. MDG diversified its product line with the launch of "TrioClear", an invisible brace, in 1Q20. We also think MDG will gradually win market share in the fast-growing global clear aligners market in the next few years, thanks to its extensive global distribution network.

Initiate with an Add rating and target price of HK10.35

We initiate coverage on MDG with an Add rating as we believe it will keep gaining market share in the global dental prosthetic market. With a 47% core EPS CAGR in FY20-23F, we apply 16x to our CY22F EPS of HK\$0.647 to arrive at our HK\$10.35 TP. Our target multiple is at a 10% discount to the global dental lab and dental consumable supplier peers to reflect its relatively short track record and modest market cap. Potential share price catalysts are 1) fast penetration of digitalisation, 2) sustainable EBITDA expansion, and 3) strong 2H21F net profit growth. Risks: slow efficiency improvement in US and margin pressure in China.

Financial Summary

	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
Revenue (HK\$m)	2,400	2,190	2,971	3,479	4,055
Operating EBITDA (HK\$m)	379	418	768	945	1,153
Net Profit (HK\$m)	161.6	107.8	480.7	622.8	797.2
Normalised EPS (HK\$)	0.16	0.27	0.50	0.65	0.83
Normalised EPS Growth	91.9%	62.2%	87.4%	29.6%	28.0%
FD Normalised P/E (x)	40.28	24.86	13.10	10.11	7.90
DPS (HK\$)	0.05	0.07	0.20	0.23	0.29
Dividend Yield	0.81%	1.07%	2.98%	3.46%	4.43%
EV/EBITDA (x)	17.99	15.46	8.01	6.11	4.53
P/FCFE (x)	33.50	15.71	43.13	13.93	9.54
Net Gearing	20.2%	7.2%	(5.6%)	(17.6%)	(30.0%)
P/BV (x)	3.20	2.81	2.31	2.10	1.75
ROE	8.0%	12.0%	19.4%	21.7%	24.2%
% Change In Normalised EPS Estimates					
Normalised EPS/consensus EPS (x)			1.09	1.12	1.22

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS



Dentistry digitalisation revolution

Investment Summary

Beneficiary of consolidation and digitalisation trend in dental prosthetic industry >

Modern Dental Group is the key mid-stream player in the global dental prosthetic market. As one of the world largest mid-stream players in the global dental prosthetic market, Modern Dental Group (MDG) has established high entry barrier for its rivals and new entrants, thanks to its reputable brand portfolio and solid distribution network. We believe MDG will benefit from the accelerated consolidation and digitalisation trend in the global dental prosthetic industry, thanks to its substantial cost advantage vs. rivals, high-quality products, product delivery efficiency and growing potential as a one-stop shop for digital solution cases.

Covid-19 pandemic and digitalisation accelerated the consolidation of dental prosthetic market >

MDG ranked in the top 3 position in the key dental prosthetic markets. MDG has expanded substantially through M&A in the past 10 years to grow its global distribution network. The company was ranked among the top 3 positions in most of the key dental prosthetic markets in 2020 (#1 in Australia, #1 in Europe, #3 in the US, and #3 in China), based on global consultancy Roland Berger and our estimate. MDG currently provides dental prosthetic products and services to 20 countries and serves a total of over 30,000 downstream customers (dentists/dental clinics) around the world, supported by an extensive global distribution network (Europe, the US, China, Australia, Hong Kong, Taiwan and Singapore).

Clear market share beneficiary as consolidation of dental prosthetic market accelerates. MDG has gained significant market share globally, especially in the US and Europe, during the Covid-19 pandemic in 2H20 and 1H21 as many small-sized labs were closed. In our view, MDG recorded strong topline growth and record-high net profit from 2H20 onwards (7% yoy revenue growth in 2H20 with net profit HK\$247m and 65% yoy revenue growth in 1H21 with net profit HK\$240m), on the back of market share expansion. While demand for global dental services had been stable in the past two years (2019 to 1H21), MDG's revenue had risen c.24% from HK\$1.19bn in 1H19 to HK\$1.48bn in 1H21, which we believe was catalysed by market share gains.

The key beneficiary of the accelerating popularity of digitalisation in dentistry. More importantly, the dental prosthetic market has entered a digitalisation era which is illustrated by the mass adoption of intraoral scanners and 3D printing, falling intraoral scanner price and popularity of clear aligners. We believe MDG is well positioned to capture market share in the fragmented global dental prosthetic market due to its fully integrated business model with global sales and marketing and extensive geographical coverage. MDG has recorded a substantial increase in digital solution cases in 1H21; the production of digital solution cases increased from c.39k cases in 1H20 (6% of total output) to c.117k in 1H21 (12% of total output). We expect digital solution penetration to grow rapidly from c.7% of total output in FY20 to 35% in FY23F, thus becoming the key net profit driver.

Potential revenue growth engines >

Apart from continued market share gains in Europe and the US, we believe the China market and clear aligner business could become MDG's new revenue growth drivers in FY21-23F. Given the relatively low digital dental care penetration rate in China (c.10% in China vs. 40% in the US) and rising awareness of oral health, we believe MDG will be in a good position to capture the fast-growing

demand for digital dental services, thanks to its advanced digital solutions technology and the premium dental prosthetic products.

MDG has also diversified to the orthodontic brace segment and launched an invisible brace, or clear aligner, "TrioClear", in 1Q20, in order to capture the fast-growing clear aligners market. We also believe MDG will gradually win market share in the clear aligners market, thanks to its extensive global distribution network.

Expected 47% core net profit/core EPS CAGR in FY20-23F ►

We estimate MDG's core net profit/core EPS, which excludes HK\$150m goodwill impairment for MicroDental (the US distribution network), will increase from HK\$256m in FY20 to HK\$797m in FY23F, driven by a 23% revenue CAGR and 8.7% pts EBITDA margin expansion, thanks to sustained market share gains in the European, US and China markets amid growing digital solution cases in its distribution network and fast-growing clear aligner business.

Valuation and recommendation ►

Initiate coverage with an Add with target price of HK\$10.35. We initiate coverage on MDG with an Add rating as we believe it will continue to gain market share in the dental prosthetic market. With a 47% core EPS CAGR in FY20-23F, MDG trades at an attractive valuation of c.10x CY22F P/E, in our view. Our TP HK\$10.35 is based on 16x CY22F EPS HK\$0.647, a 10% discount to global dental lab and dental consumable supplier peers. This reflects its relatively short track record and modest market capitalisation. We also value MDG through a discounted cash flow (DCF) methodology. Our DCF model is until FY30F. We use an average WACC of 8.2% and a terminal growth rate of 2% and arrive at DCF per share of HK\$10.76.

Share price catalysts. MDG's valuation has risen to 10-20x in Jan-Oct 21, compared with 8-10x prospective P/E in 2017-2020 due to its sustained business recovery and continuous market share gains in 2H20 and 1H21. We believe MDG's valuation re-rating will continue, catalysed by 1) fast penetration of the digitalisation in its distribution network, 2) sustainable EBITDA expansion, 3) rapid development of the clear aligner business, and 4) strong net profit growth in 2H21F.

Key risks. The key risks to our earnings forecasts include 1) slow efficiency improvements in the US market, 2) margin pressure from keen competition in the China market, and 3) slower-than-expected digitalisation penetration in its distribution network.

Figure 1: Peers comparison

Company	Code	Recom.	Price	Target price	Upside (%)	Market Cap (US\$m)	P/E (x)			3-year EPS CAGR %	PEG (x)	P/BV (x)		ROE		EV/EBITDA (X)		Yield	
			(local curr)	(local curr)			CY20	CY21F	CY22F			CY21F	CY22F	CY21F	CY22F	CY21F	CY22F	CY21F	CY22F
Modern Dental Group	3600 HK	Add	6.54	10.35	58%	805	24.9	13.1	10.1	49.8%	0.50	2.3	2.1	19.4%	21.7%	8.0	6.1	3.0%	3.5%
Dental labs and dental consumable suppliers																			
Dentsply Sirona	XRAY US	Not Rated	58.28	N/A	N/A	12,737	37.4	20.2	18.1	31.6%	1.18	2.4	2.3	11.3%	11.5%	13.7	12.0	0.7%	0.7%
Henry Schein	HSIC US	Not Rated	79.01	N/A	N/A	11,037	26.2	18.4	17.5	16.4%	1.60	2.8	2.5	15.8%	15.2%	11.9	11.0	0.0%	0.0%
Envista	NVST US	Not Rated	38.75	N/A	N/A	6,249	46.7	19.8	18.4	43.0%	1.09	1.6	1.5	9.0%	8.5%	12.5	11.2	0.0%	0.0%
Osstem Implant	048260 KS	Not Rated	141,100	N/A	N/A	1,710	26.2	19.6	16.1	30.6%	0.86	7.1	4.9	42.4%	36.3%	11.6	9.3	0.5%	0.5%
Average							34.1	19.5	17.5	30.4%	1.18	3.5	2.8	19.6%	17.9%	12.4	10.9	0.3%	0.3%
Dental clinics																			
Topchoice Medical Corporation	600763 CH	Not Rated	229.96	N/A	N/A	11,533	136.4	99.4	75.2	32.9%	4.15	25.5	19.1	26.2%	25.9%	66.8	50.6	0.0%	0.0%
Q&M Dental	QC7 SP	Not Rated	0.59	N/A	N/A	409	32.5	17.2	15.4	31.3%	1.04	4.5	4.0	28.0%	30.2%	9.7	9.8	5.8%	5.8%
Pacific Smiles Dental	PSQ AU	Not Rated	2.90	N/A	N/A	345	63.0	30.9	145.0	30.2%	2.08	7.1	7.5	31.3%	5.5%	14.2	25.8	2.3%	0.7%
Average of regional peers							77.3	49.1	78.5	31.5%	2.42	12.4	10.2	28.5%	20.5%	30.2	28.8	2.7%	2.2%
Clear aligner providers																			
Align Technology	ALGN US	Not Rated	599.49	N/A	N/A	47,367	126.4	54.5	45.1	51.4%	2.46	12.7	10.8	23.7%	23.3%	39.5	32.3	0.0%	0.0%
Straumann	STMN SW	Not Rated	1,852.0	N/A	N/A	32,117	124.0	71.9	58.3	36.1%	3.43	19.7	15.6	29.1%	29.7%	47.1	40.5	0.4%	0.5%
Angelalign Technology	6699 HK	Not Rated	322.2	N/A	N/A	6,975	210.3	137.5	114.5	47.0%	4.47	18.7	16.0	16.2%	18.0%	N/A	N/A	0.0%	0.0%
Average of regional peers							153.5	87.9	72.6	44.8%	3.46	17.0	14.1	23.0%	23.6%	43.3	36.4	0.1%	0.2%

SOURCES: CGS-CIMB RESEARCH ESTIMATES. COMPANY REPORTS, BLOOMBERG (PRICE AT AS 21 OCT 2021)

Note: All forecasts for Not rated companies are based on Bloomberg consensus estimates

Modern Dental Group staying strong in dental prosthetics industry consolidation and digitalisation

Modern Dental Group gaining market share in the accelerated consolidation of dental prosthetic market ➤

In our view, the fragmented dental prosthetic market is going through consolidation in recent years, catalysed by Covid-19 pandemic and digitalisation.

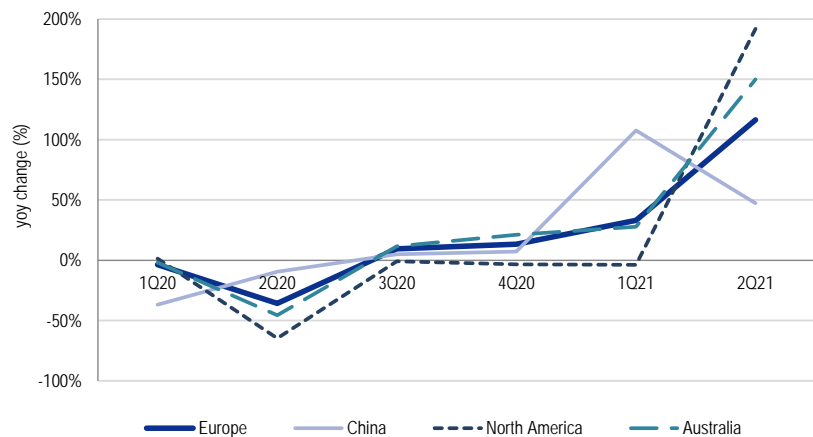
Thanks to relatively low entry barriers, hundreds of thousands of small dental laboratories entered the market 20-30 years ago. Due to consolidation, however, only a few thousand labs operate today, i.e. c.5,000 small labs in the US and 3,000-5,000 small labs in Europe. Meanwhile, the pandemic has undermined mid-to-small-scale competitors' competitiveness which accelerated consolidation. In our view, Modern Dental Group should benefit from this in terms of market share.

Modern Dental Group (MDG) gained significant market share globally, especially in the US and Europe during the Covid-19 pandemic in 2H20 and 1H21, thanks to the consolidation of the dental prosthetics industry given many small-sized labs were closed during the period.

In our view, MDG has recorded strong topline growth and record-high net profit from 2H20 onwards (7% yoy revenue growth in 2H20 with net profit HK\$247m and 65% yoy revenue growth in 1H21 with net profit HK\$240m, Figure 2), on the back of market share expansion. Note the demand for global dental services was stable in the past two years (2019 to 1H21). MDG's revenue rose c.24% from HK\$1.19bn in 1H19 to HK\$1.48bn in 1H21, which we believe was catalysed by market share gains.

With its extensive geographical coverage (Europe, the US, China, Australia and HK) in the dental prosthetic industry, MDG is well-positioned to absorb market share from exiting players. Given the ongoing market consolidation in most of the regions, we forecast that the company will likely maintain robust topline growth with a c.23% CAGR in FY20-23F.

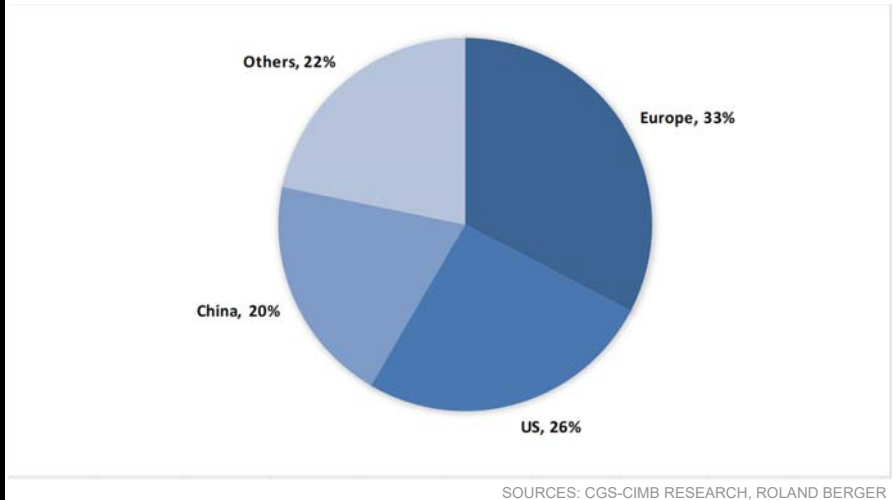
Figure 2: Total revenue yoy growth in different markets (1Q20-2Q21)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

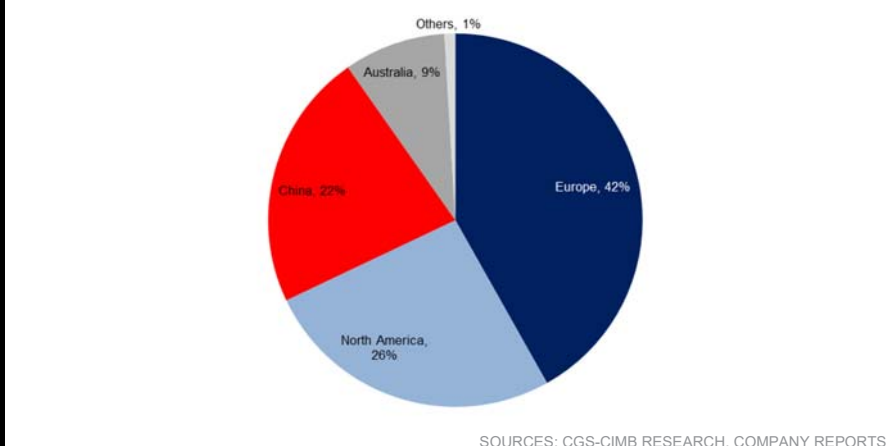
MDG ranked in the top 3 positions in the key dental prosthetic markets. MDG is ranked among the top 3 in most of the key countries and jurisdictions. Based on our estimates and global consultancy Roland Berger's figures, MDG ranked No. 1 with c.10% market share in Australia in 2020 (vs. c.7.1% in 2014) and c.3% in Europe in 2020 (vs. c.1.0% in 2014), in term of revenue. MDG was also the largest player in Hong Kong with over 60% market share in 2020 (vs. c.54.2% in 2014), in terms of revenue. MDG is also among the top-3 players in the US market with around 1% market share in 2020 and in China with c.1% market share in 2020.

Figure 3: Global dental prosthetics market mix by geography (2020)



MDG’s revenue split in FY20. In FY20, MDG’s revenue split was Europe (c.42% of FY20 revenue), North America (c.26%), Greater China, or Mainland China, Hong Kong, and Macau, (c.22%), Australia (c.9%), and other regions (c.1%) (Figure 4).

Figure 4: MDG total revenue mix, by regional markets (FY20)

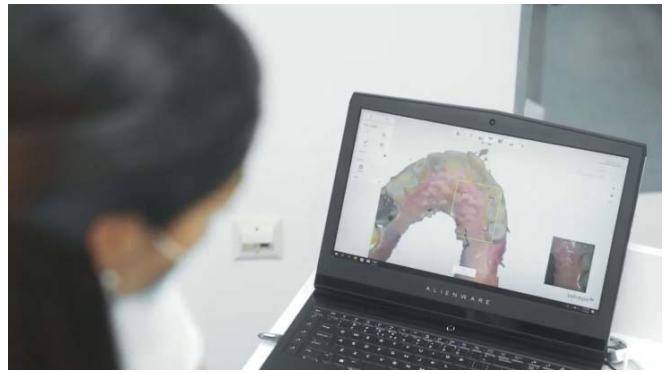


Digitalisation to provide new revenue growth momentum ➤

Accelerating popularity of digitalisation in dentistry. The dental prosthetic industry is rapidly transforming from conventional dental artificial replacement to those generated with advanced computer-aided design and computer-aided manufacturing (“CAD/CAM”) techniques in the recent years. Dentists nowadays widely adopt intraoral scanning to generate visual model of patients’ dental health, capture complete denture impressions, tooth positions and centric relation records for dental treatments. On the other hand, the use of digital solution cases helps achieve more accurate prosthetic products, reduces re-make rate, leads to faster turnaround time between dentists and labs, and have lower logistical costs. It creates a huge market demand for digital solutions and accelerates the market penetration rate. More importantly, the falling intraoral scanner price and popularity of clear aligners should accelerate the digital solution penetration rate (Figure 5 and 6).

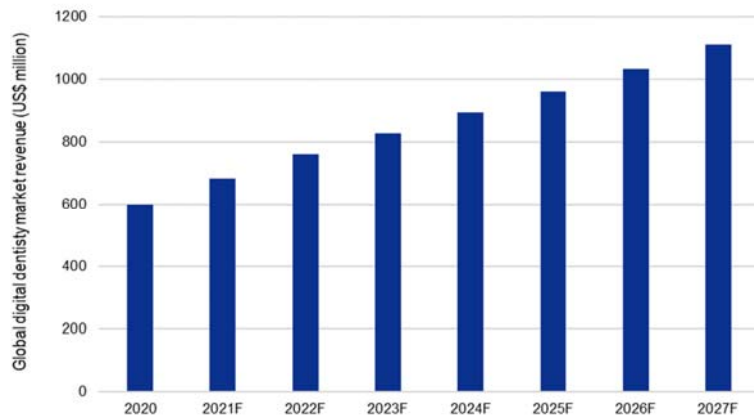
Figure 5: Intraoral scanner


SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 6: Dentist analyses the denture impression


SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

According to Data Bridge, a global market research and consulting firm, the digital dentistry market is expected to increase from c.US\$600m in 2020 to c.US\$1.1bn in 2027F at a CAGR of 9.5% during the period. This is driven by 1) lower cost of devices, and 2) increasing adoption of CAD/CAM techniques (Figure 7).

Figure 7: Global digital dentistry market revenue (2020 - 2027F)


SOURCES: CGS-CIMB RESEARCH, DATA BRIDGE

Leading digital dentistry solutions provider. MDG is a leading player in digital dentistry solutions, particularly intraoral scanning cases. In France, for example, the company sold 50 intraoral scanners in FY20. This increased to 40 intraoral scanners sold every month in 1H21. In a similar vein, the company was able to increase production of digital solution cases in its China-based facilities to c.117k cases in 1H21 (12% total output) vs only c.39k cases in 1H20 (6% of total output). Overall, an increasing portion of work is delivered by 3D printing and CAD/CAM technologies. According to our estimates, digital solution cases contributed to c.15% of MDG's total shipments of dental prosthetic products in 1H21 (vs. c.7% in 2020). We estimate digital solution case penetration rate in MDG to grow rapidly from c.7% of total output in FY20 to c.35% in FY23F thus becoming the key net profit driver. This is thanks to its extensive geographical coverage and advance digital solutions.

Digitalisation is a strong tailwind. In our view, digitalisation is a strong tailwind for MDG, thanks to 1) extensive presence of dental digital platforms across its distribution network, and 2) a decline in shipping and labour costs for digital solution cases.

1) Extensive presence of dental digital platforms

MDG has established digital production centres across main regions where it operates, including Hong Kong, China, the US, Australia, and Europe (mainly in Germany, France, the Netherlands, Spain and Switzerland etc.), to ensure timely delivery when customers require a quick turnaround. By capitalising on the extensive dental digital platforms, we believe that MDG is well positioned to benefit from the accelerated digitalisation trend.

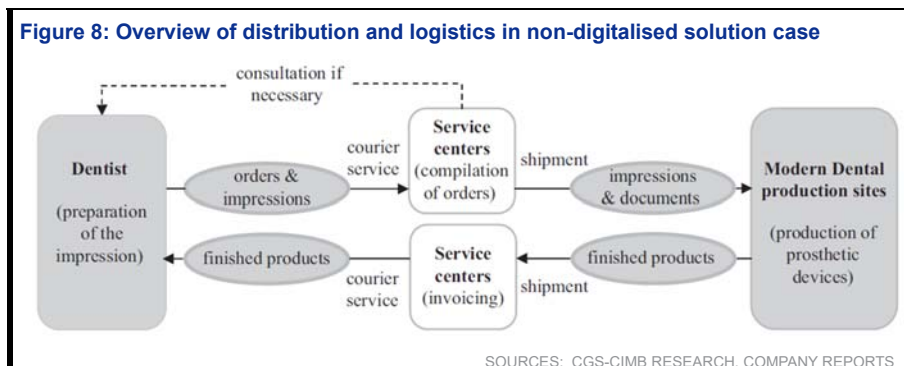
2) Decline in shipping and labour costs for digital solution cases

The logistics cycle for dental prosthetics and other medical devices is illustrated as follows. Dentists place orders and send impressions to service centres, which in turn ship them to production sites. MDG then ships finished custom-made products to service centres, which in turn deliver them to dentists (see Figure 8).

In this cycle, shipping occurs four times: dentist to service centre, service centre to production site, production site to service centre, and service centre to dentist.

As for digital solution cases, however, the incidence of physical shipping is halved because dentists can simply email digital impressions to MDG in the first place. In other words, physical shipping costs only occur when finished cases are shipped to service centres and dentists.

In addition, 3D printing contributes to cost reduction by substituting manual work. Based on our estimates, 3D printing currently saves up to c.10% of labour costs for digital solution cases. In our view, MDG will likely save up to c.60% of labour costs, as digitalisation steps up.



Key competency; global distribution network coverage ➤

MDG has extensive coverage of global markets. MDG has expanded substantially through M&A in the past 10 years, growing its global distribution network. We believe that MDG is the only multinational denture services provider in the world nowadays (Figure 9).

Figure 9: Modern Dental Group brand portfolio (distribution network) as at 30 Jun 2021

Brand Name	Logo	Geographic Coverage	Acquisition Date
Modern Dental Laboratory		Hong Kong	Established in 1986
Yangzhijing		Mainland China	Set up in 1998
Modern Dental USA		United States	Acquired in 2009
Labocast		France	Started doing business in 1996 and acquired in 2011
Digitek Dental		Hong Kong, Macau	Set up in 2012
Permadental & Semperdent		Germany	Acquired in 2013
Quantum Dental (consolidated into MicroDental)		Canada	Acquired in 2013
Gold & Ceramics		Australia	Acquired in 2013
Sundance Dental (consolidated into MicroDental)		United States	Acquired in 2014
Labo Ocean Indien		France and Indian Ocean countries	Acquired in 2014
Elysee Dental		Netherlands, Belgium, Denmark, Norway, Switzerland, Spain, Sweden, Finland	Started doing business and acquired in 2014
Southern Cross Dental		Australia, New Zealand, Ireland	Started doing business and acquired in 2015
Andent Dental		Australia	Acquired in 2015 and consolidated under Southern Cross Dental
Precision Dental		New Zealand	Acquired in 2016
Cenetry (consolidated into Southern Cross Dental)		Australia	Acquired in 2016
Ratiodental and Zahnmanufaktur		Germany	Acquired in 2016
MicroDental		United States	Acquired in 2016
Dentrade		Norway and Denmark	Acquired in 2016
CDI Dental AB		Sweden	Acquired in 2017
Schmidt		Denmark	Acquired in 2017
Modern Dental Singapore		Singapore	Set up in 2018
Modern Dental Taiwan		Taiwan	Set up in 2019
DD Dental		Germany	Acquired in 2019
TrioClear (Invisible Braces)		Australia, Belgium, Denmark, Finland, Germany, Hong Kong, Netherlands, New Zealand, Norway, Taiwan, Singapore, Spain, Sweden	Started doing business in 2020
Swift Dental		Australia	Acquired in 2021

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Renowned brands in its distribution network. MDG provides services to 20 countries and serves a total of over 30,000 downstream customers (dentists and dental clinics) around the world in 1H21, among which c.1,000 new customers came from Europe, c.4,000 new customers from China, and c.200 new customers from Australia.

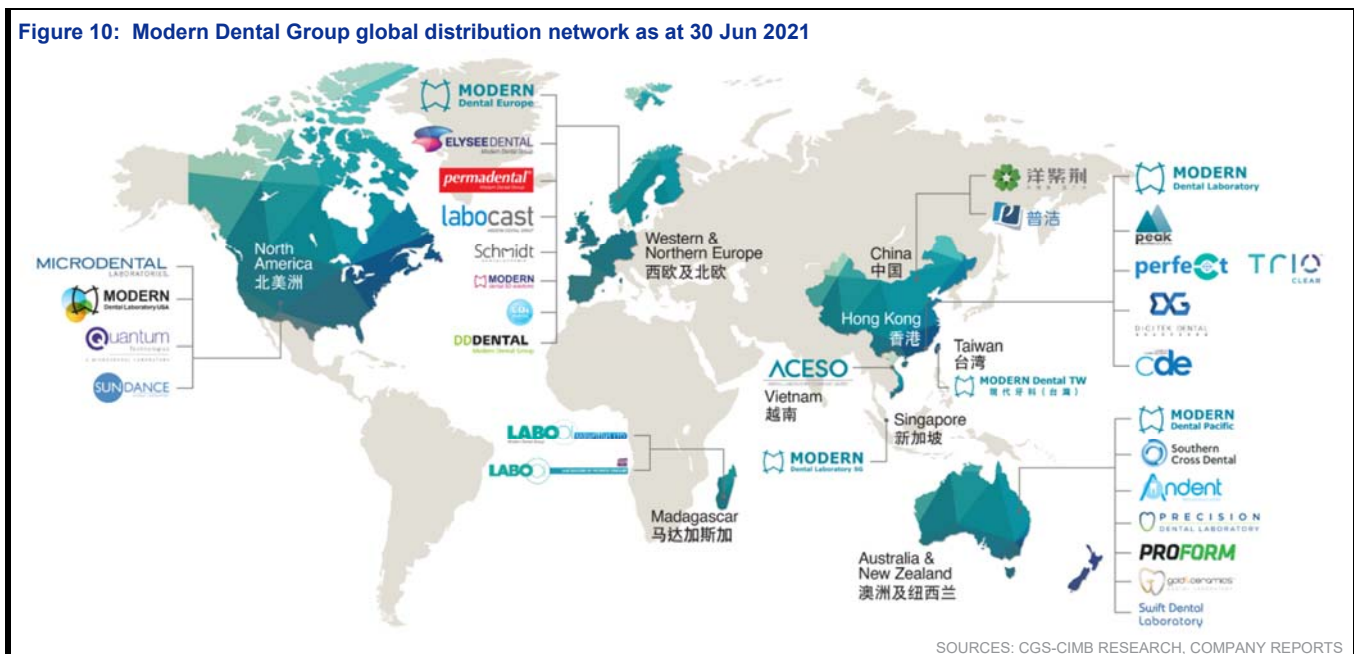
On top of the extensive customer network, the company has the competitive edge in terms of branding because it has lined up c.20 global renowned brands, including Labocast in France, Permadental in Germany, Elysee Dental in the Netherlands, Southern Cross Dental in Australia, YangZhijing in China and MicroDental in the US, in its distribution network via M&As over the past 10 years (See Figure 9 and 10).

We believe that customers are willing to accept price mark-ups by MDG, thanks to the reputable brand names in its distribution network. As a side note, branding turns into a significant entry barrier in the dental prosthetics market because dentists prefer brands with proven track records.

MDG’s global distribution network coverage supports its healthy margins.

As a dental laboratory (mid-stream), MDG purchases raw materials from consumable suppliers (upstream) and delivers custom-made products to dental clinics (downstream). In the process, the company has established a robust distribution network to reach downstream customers overseas. In our view, the distribution network is a strong driver for healthy margins because 1) the company can mark up prices by 2-3x in developed jurisdictions, and 2) dentists, or downstream customers, trust the brands in its distribution network.

Figure 10: Modern Dental Group global distribution network as at 30 Jun 2021



Competitive market position. In our view, MDG is almost unrivalled as the leading mid-stream player. Upstream suppliers are not likely to challenge the company by expanding into mid-stream services, due to the barrier of distribution network, in which it already has a competitive edge. MDG’s broad distribution network and low cost production base help the company to overcome the geographical barrier and facilitate low logistical costs and efficient turnaround.

Figure 11: Unique position in global dental industry supply chains



MDG’s competitors. MDG has different competitors depending on the geographic regions. In the US, major competitors include Glidewell Dental (Unlisted), National Dentex (Unlisted) and Dental Services Group (Unlisted). In Europe, major competitors are Dentsply International (XRAY US, Not Rated), Sirona Dental (Unlisted), Glidewell Dental, and Kulzer (Unlisted). In China, key competitors include KTJ Dental Lab (Unlisted) and Jiahong Dental Lab (Unlisted) (Figure 12).

Figure 12: Key competitors in the US, Europe and China as at 30 Jun 2021



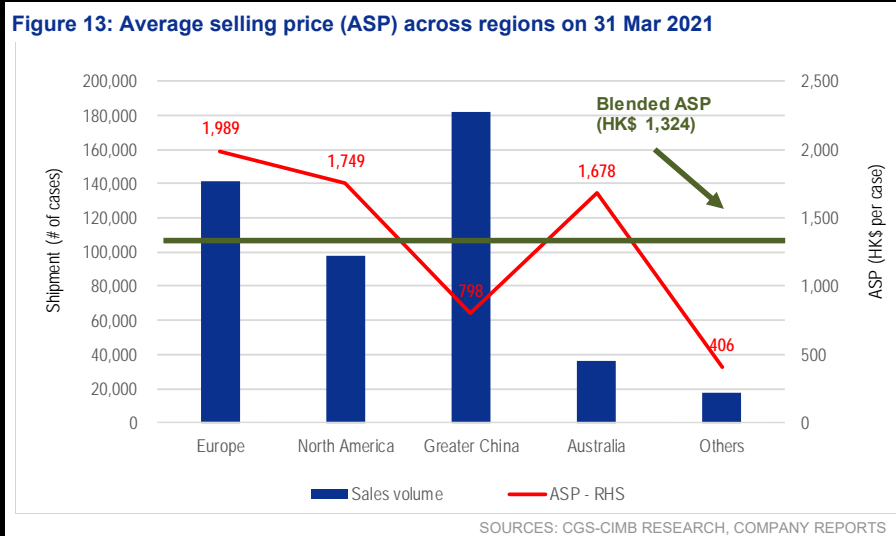
MDG benefits from stickiness of downstream customers. On one hand, customers tend to choose renowned brands with track records of proven quality. In this area, the company has the upper hand because it has established a line-up of c.20 reputable brands via acquisitions over the past years.

Manufacturing c.95% of products in its Dongguan (headquarter) and Shenzhen labs in China, the company can also reduce labour and production costs and hence provide competitive prices in developed markets. Accordingly, customers are willing to accept 2-3x price premiums in Europe and Australia.

Price discrimination in developed countries and jurisdictions. MDG manufactures over 95% of dental prosthetics in China and ships them to Europe, Australia and Hong Kong. Thanks to lower labour and production costs in China,

the company marks up prices in developed countries and jurisdictions. The company also does not dilute margins in distribution because it executes direct sales to downstream customers via over 20 reputable brands. As demonstrated in Figure 13, the company marks up ASP by c.2-3x in Europe (c.HK\$2,000 in 1Q21) and Australia (c.HK\$1,700), compared to China (c.HK\$800). As a result, the company records c.55-65%/c.15-25% GPM/OPM in overseas markets (ex-US).

US exception. Price discrimination is not applicable in the US, where MDG adopts a different operational model. The company manufactures and distributes via US-based dental lab “MicroDental”, where c.80% of its products are sold in the US. As a result, we estimate MDG achieves relatively weaker margins in the US, or c.35-40% GPM and c.10-20% OPM.



Vietnam facility to commence production in early-2022. MDG manufactures c.95% of dental prosthetic devices sold across the globe in Shenzhen and Dongguan, China. Centralising production facilities in China could worry investors, due to 1) the rise of labour and production costs in China, and 2) any disruption in its supply chain caused by geopolitical conflicts. In response, the company is building a new production facility in Vietnam and will run smaller scale production sites in different parts of the world in order to mitigate this risk.

MDG plans to have c.200 technicians at the Vietnam production by FY23-24F base (currently over 2,800 technicians in China). The company expects Vietnam lab to commence production in 1Q22F with around 20 technicians, and to start shipments to the US market in 2Q22F.

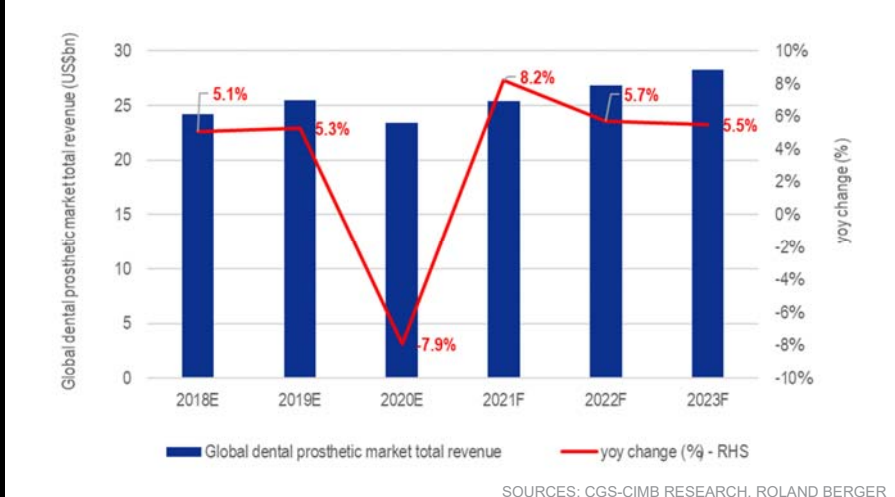
Dental prosthetic market maintains sustainable growth >

Dental prosthetic market maintains healthy organic growth. In our view, the dental prosthetics market will revert to a trajectory of sustainable growth in FY21F-25F, as the pandemic shock fades.

Based on Roland Berger’s estimates that the global dental prosthetics market will reach c.US\$27.3bn in 2023F, a c.5.4% revenue CAGR in 2020-23F (Figure 14).

In our view, the market growth is supported by three sustainable drivers, 1) ageing population, 2) public oral health awareness, and 3) per capita disposable income growth (we discuss the details in Appendix I, P.35-36).

Figure 14: Roland Berger's projection of the global dental prosthetics market total revenue (2018-2023F)

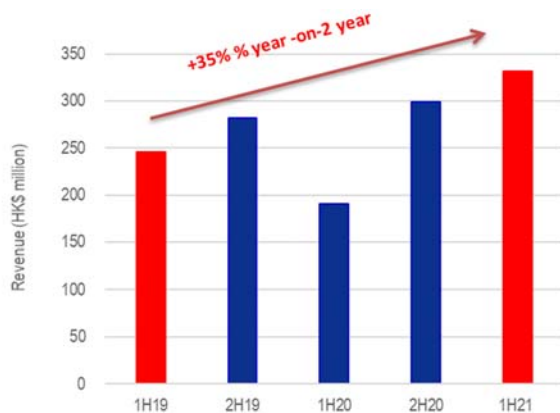


China is another potential revenue growth engine for MDG ➤

Sustainable growth momentum in China market. MDG's operation in China has not just rebounded strongly from the pandemic shock with revenue +c.75% yoy in 1H20-1H21 but also exceeded the pre-pandemic benchmark by a large margin with +c.35% yoy in 1H19-1H21 (Figure 15). We believe that the demand for digital dental services, in particular, will drive growth momentum in China market, thanks to 1) an overall rise in living standards in recent years, 2) awareness of the importance of oral health, and 3) increasing penetration of digital dental services.

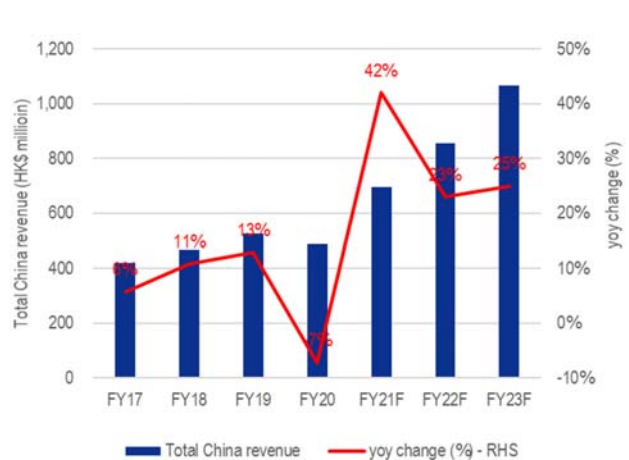
Regarding the penetration of digital dental services, China recorded only c.10% penetration rate of intraoral scanners in 2020 (vs c.40% in the US) and hence would have much room for potential growth in digital dental care. We estimate MDG to achieve 30% revenue CAGR in China market in FY20-23F, driven by market share gains on digitalisation trend, increasing awareness of oral health and popularity of dental aesthetics (Figure 16).

Figure 15: Historical quarterly revenue in China (1H19-1H21)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 16: Total revenue projection in China (FY18-23F)



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

MDG diversifies its product line with the launch of TrioClear ▶

Product overview. Launched in 1Q20, TrioClear aligners, a new generation of orthodontic brace, are nearly invisible and straighten teeth by using multiple sets of clear aligners, which are custom-made to gradually move teeth step-by-step to the ideal position (Figure 17 – 19 to compare different type of orthodontic brace). TrioClear leverages on MDG’s proprietary advanced CBCT Root simulation and TrioDim Force Technology to achieve a more accurate prediction and outcome (Figure 20 - 21).

Figure 17: Metal brace



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 18: Clear brace



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 19: Invisible brace / clear aligner



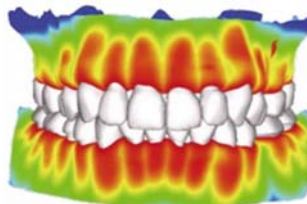
SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 20: Why TrioClear?



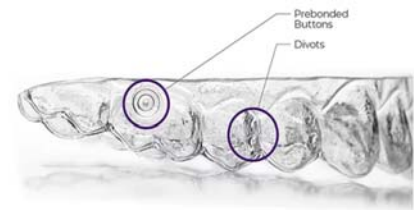
SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 21: Advanced CBCT Root Simulation



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 22: TrioDim Force Technology



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Huge growth potential in the fast-growing clear aligner industry. MDG is a latecomer in dental clear aligner market, compared with the key market player “Invisalign” from Align Technology (ALGN US, Not Rated), “Clearcorrect” from Straumann (STMN SW, Not Rated) and “Anglealign” from Anglealign Technology (6699 HK, Not Rated). Yet, we believe that TrioClear could drive MDG’s topline growth as a strategic product thanks to robust growth potential of clear aligners.

The company first launched TrioClear in Hong Kong in 1Q20, Australia in 2Q20, and Europe in 3Q20. According to the management, over 1,000 dentists tried “TrioClear” for orthodontic treatment in 1H21 and the company received positive feedback. Note that TrioClear has not entered the Mainland China market yet. Given a relatively short track record, TrioClear contributed only c.0.7% of 1H21 sales (vs. c.0.1% in 1H20).

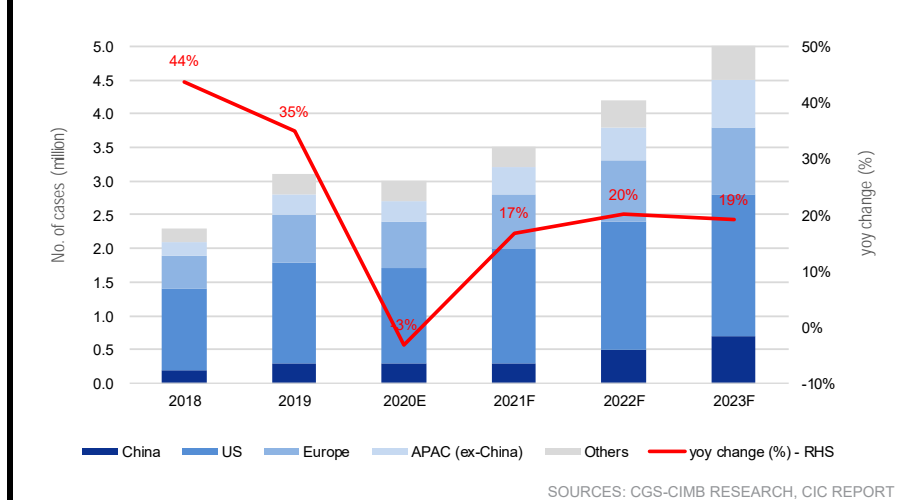
China to drive the clear aligner market. According to the China Insights Industry Consultancy (CIC) report (an independent market research and consultancy company), the global clear aligner market will be driven by developing markets, particularly China, where clear aligners are relatively less adopted.

CIC forecasts the global clear aligner market to increase at a CAGR of 16% from c.3.0m treatment cases in 2020 to c.4.7m treatment cases in 2023F, mainly driven by China (Figure 23).

China’s clear aligner market is relatively small with only 0.3m treatment cases in 2020, considering its population is over 1.4bn. CIC expects the number of clear aligner treatment cases to increase to 0.8m in 2023F, a 39% CAGR in 2020-23F. This should be driven by rising consumption power and digitalisation penetration growth.

The US remained the largest market for clear aligners with 1.4m clear aligner treatment cases in 2020 while Europe was the second largest clear aligner market with 0.7m treatment cases in 2020.

Figure 23: Global clear aligner treatment cases (2018-2023F), estimate by CIC



TrioClear revenue likely achieve rapid growth in FY-23F. We believe that MDG will gradually grab market share globally from the fast-growing demand for the orthodontic and clear aligners over the next few years, supported by 1) its extensive global distribution network which is connected to over 30,000 dentists, and 2) advance design and technology of its dental clear aligner “TrioClear”.

We estimate TrioClear revenue to grow rapidly at over 100% yoy p.a. from c.1% of FY21F revenue to c.4% FY23F revenue, i.e. from c.HK\$30m in FY21F to c.HK\$150m in FY23F. This should be driven by services coverage expansion and rapid penetration growth.

Comparison with peers' products. We compare TrioClear with two peer products, namely Invisalign, or the dominant clear aligner brand, and traditional braces, as illustrated in the table below (Figure 24).

Figure 24: Comparisons among TrioClear, traditional braces and Invisalign® as at 30 Jun 2021

	Traditional braces	Invisalign	TrioClear
Prices (ex-factory)	HK\$2,000-6,000	HK\$15,000-20,000	HK\$8,000-10,000
Physical consultation with dentists	Necessary for the whole treatment	Necessary for the whole treatment	Necessary for the whole treatment
Wearing time	24/7 for the whole duration of treatment	20–22 hours/day	At least 20 hrs per day
	Varies on a case by case basis	Varies on a case by case basis	Varies on a case by case basis
Effectiveness	Effective in coping with complex problems	Effective in tackling minor alignment problems	Effective in tackling minor alignment problems
		Less effective for complex issues	Less effective for complex issues
		Require self-discipline	Require self-discipline
Safety & hygiene	Harder to maintain	Removable trays prevents stains from building up	Removable trays prevents stains from building up
	May cause irritation	Fewer irritating problems	Wider margins protect teeth and gums
	Require orthodontists to clean and monitor		Medical grade FDA approved materials
Discomfort level	Pain and soreness	Minor discomfort after changing tray	Gentle progress by 3-step solution
	Difficult to clean causes tooth discolouration and excessive buildup	Removable when user feel discomfort	Thinnest aligner is less than 0.5mm to reduce pressure in first stages of movement
	Not removable		Removable when user feel discomfort
Technology	3D scanning technology	3D modeling	CAD / CAM Technology
	Temporary Anchorage Devices (TAD)	iTero scanners	Intraoral scanner
			Advanced CBCT Root Simulation
Appearance	Highly visible (Metal-typically silver)	Virtually invisible	Increased gingival coverage to make margins of aligners less visible Fewer attachments by utilizing TrioDim Force™ Technology
Convenience	Have to avoid hard food	Removable when eating drinking or brushing	Removable when eating drinking or brushing
	Need more visits fro adjustments and emergency problems	Less visits to orthodontist	Less visits to orthodontist

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

SWOT analysis ►

Figure 25: SWOT analysis

Strengths	Opportunities
<p>MDG is the only multinational denture service and manufacturer in the world. The company owns and manage over 100 subsidiaries (distributors) worldwide and provides dental prosthetic products and services to 20 countries and over 30,000 dentists around the world.</p>	<p>MDG will likely continue to gain market share in global dental prosthetics industry due to its strong brand name and worldwide distribution network.</p>
<p>MDG has significant cost advantage over its competitors due to its huge purchases ability and low cost production base (skillful technicians) in China.</p>	<p>Dental prosthetics industry is under consistent consolidation due to the digitalisation trend and the high barriers to entry.</p>
<p>MDG has built very strong brand loyalty (high quality and reliable products delivery time) with dentists which allows the company to achieve higher price mark up on its dental prosthetic products.</p>	<p>According to Roland Berger, global dental prosthetics markets is expected to deliver c.10-15% revenue CAGR in 2020 to 2025F, driven by aging population, public oral health awareness, and per capita disposable income growth.</p>
Weaknesses	Threats
<p>High concentration of production facilities in China could affect its profitability due to rising labour and production costs in China.</p>	<p>A potential M&A may cause short term margin pressure.</p>
	<p>A potential disruption in the global dental prosthetic supply chain caused by geopolitical conflicts.</p>

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS


Good track record of ESG compliance ►

MDG has been compliant with the ESG guidelines set by the Hong Kong Exchange since it was listed in Dec 2015. Hence, we find none, if any, ESG-driven risk for the company. Here are the key ESG highlights for the company.

Environmental. MDG recorded no violation of environmental protection laws, as of FY20, in regions where the company has manufacturing operations, such as mainland China, Germany and the Netherlands.

Social. To contribute to social health and safety, MDG practices safety procedures in production and flexible work arrangements to safeguard the wellbeing of its employees and contractors during the Covid-19 outbreak.

Governance. In relation to company stakeholders, MDG promotes sustainable workplace based on diversity and has no record of violating employment and labour laws, as of FY20.

ESG in a nutshell	
	
<p>MDG has been compliant with the ESG guidelines set by the Hong Kong Exchange since it was listed in Dec 2015. In our view, the company is not involved in environmentally detrimental industry practices and takes effort to minimise environmental impact of its operations. We illustrate below its key ESG takeaways in the environmental dimension.</p>	
<p>Keep your eye on</p> <p>Compliance with environmental protection laws across diverse jurisdictions.</p>	<p>Implications</p> <p>MDG recorded no violation of environmental protection laws, as of FY20, in regions where the company practices manufacturing operations, such as mainland China, Germany, and the Netherlands.</p>
<p>ESG highlights</p> <p>Sustainable industrial waste management.</p>	<p>Implications</p> <p>MDG generates solid and liquid waste in the manufacturing process, including waste ceramic blocks and plaster residue. We note that the company has installed equipment to collect such waste.</p>
<p>Trends</p> <p>Status quo with no noticeable update.</p>	<p>Implications</p> <p>Hazardous waste includes waste acidic solution, batteries, fluorescent tubes and electrolytes. Non-hazardous waste includes gypsum, waste ceramic blocks, and empty paint cans.</p> <p>For MDG, hazardous and non-hazardous waste has been under control over the years. Given the rare exposure to environmentally detrimental practices, the company operates production without much constraint (Figure 26).</p>

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 26: Hazardous vs non-hazardous wastes

tonne	2017	2018	2019	2020
Total	1,544.0	954.0	1,853.3	1,591.4
Hazardous waste	3.2	2.7	3.3	2.7
Non-hazardous waste	1,540.7	951.3	1,850.0	1,588.8
Intensity (tonne/ sales volume '000)	0.89	0.54	1.03	0.98

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Financials

FY20-23F core EPS CAGR of 47% ➤

FY17-20 net profits were volatile. MDG's net profit peaked at HK\$155m in FY17 after a few major acquisitions, including MicroDental (distribution network) in the US, and Cenetry (distribution network) in Australia. However, its FY18 net profit dropped to HK\$85m due to poor performance of the US market. MDG's net profit steadily recovered to HK\$162m in FY19 on improved efficiency in the US market and strong sales performance in the China market. FY20 net profit fell to HK\$108m due to the negative impact from Covid-19 pandemic and a HK\$150m goodwill impairment for MicroDental. Excluding the HK\$150m goodwill impairment, core net profit in FY20 was HK\$256m, up 59% yoy, due to strong business recovery in 2H20 (a record high second-half net profit of HK\$247m), thanks to robust demand for dental prosthetics products globally after economies reopened in the US, Europe, China and Australia.

Estimate 47% core net profit/core EPS CAGR in FY20-23F. We estimate MDG's core net profit will increase from HK\$256m in FY20 to HK\$797m in FY23F, a 47% core net profit/core EPS CAGR in FY20-23F, driven by a 23% revenue CAGR and 8.7% pts EBITDA margin expansion, thanks to sustained market share gains in the European, US and China markets amid growing digital solution cases in its distribution network and fast-growing clear aligner business.

We estimate a 23% revenue CAGR in FY20-23F, mainly driven by China (+30% CAGR) and Europe (+23% CAGR) market due to fast digitalisation penetration in the distribution network (Figure 27 and 28).

We project EBITDA margin will gradually improve from 20.2% in FY20 to 28.9% in FY23F, driven by 4.6% pts gross profit margin (GPM) expansion from higher contribution from digital solutions case and fast growth of high-margin markets.

Figure 27: Revenue projection, breakdown by geography (FY17 - FY23F), estimate by CGS-CIMB Research

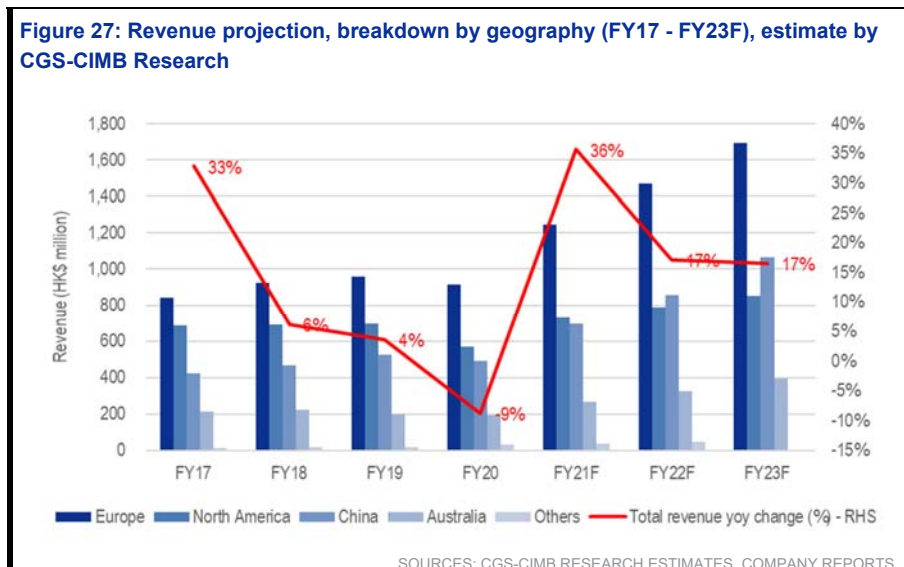
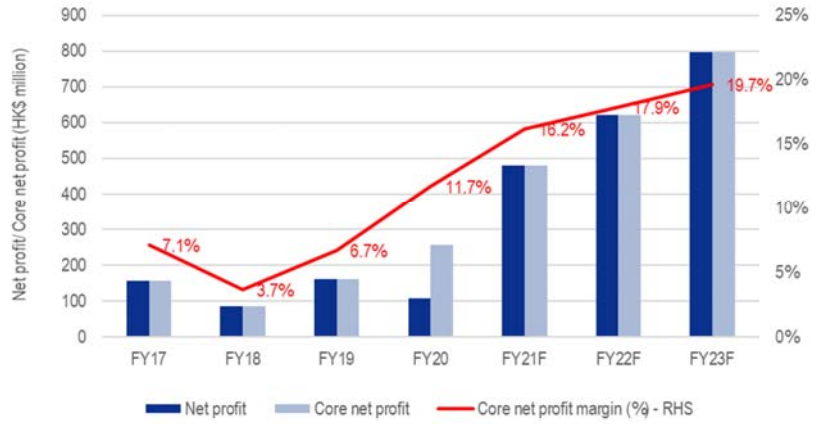
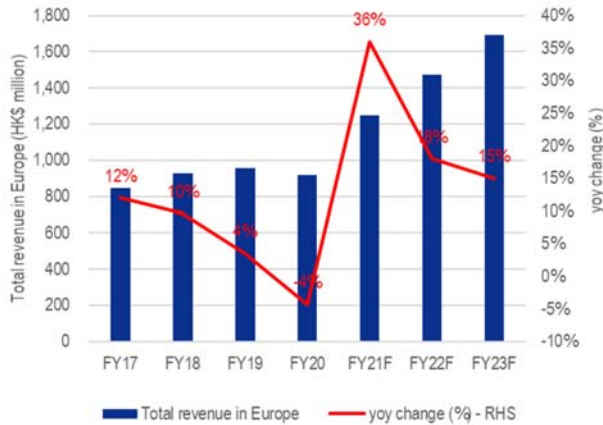


Figure 28: Estimated net profit and core net profit (FY17 - FY23F), estimate by CGS-CIMB Research



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 29: Total revenue projection in Europe (FY17-23F), estimate by CGS-CIMB Research



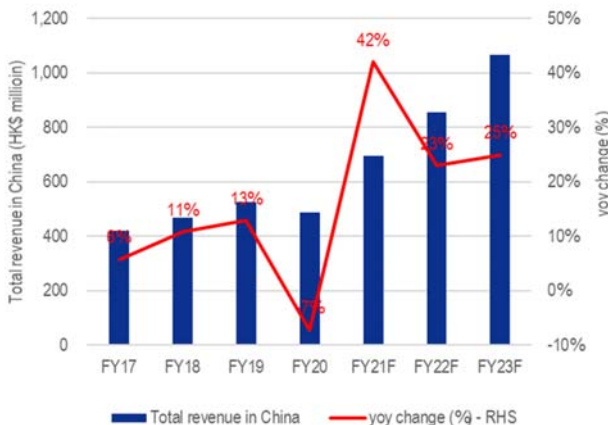
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 30: Total revenue projection in North America (FY17-23F), estimate by CGS-CIMB Research



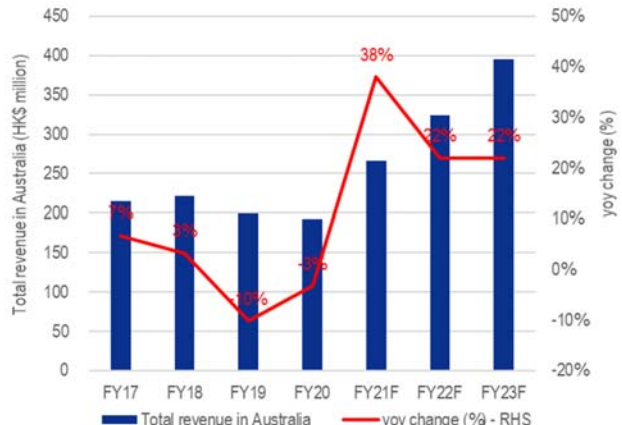
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 31: Total revenue projection in China (FY17-23F), estimate by CGS-CIMB Research



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 32: Total revenue projection in Australia (FY17-23F), estimate by CGS-CIMB Research



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 33: Projected revenue by geography (FY17 to FY23F), estimate by CGS-CIMB Research

FYE 31 Dec (HK\$m)	FY17	FY18	FY19	FY20	FY21F	FY22F	FY23F
Revenue by geography (HK\$m)							
Europe	844	925	958	917	1,247	1,471	1,692
North America	687	688	697	571	731	790	853
China	421	467	527	489	695	854	1,068
Australia	215	222	199	193	266	324	396
Others	14	14	19	21	33	39	47
Total	2,181	2,315	2,400	2,190	2,971	3,479	4,055
Revenue by business segments (yoy %)							
Europe	12.0%	9.6%	3.6%	-4.3%	36.0%	18.0%	15.0%
North America	148.0%	0.2%	1.3%	-18.1%	28.0%	8.0%	8.0%
China	5.8%	10.8%	12.9%	-7.2%	42.0%	23.0%	25.0%
Australia	6.7%	3.3%	-10.2%	-3.2%	38.0%	22.0%	22.0%
Others	17.7%	-4.3%	35.8%	8.9%	60.0%	20.0%	20.0%
Total	32.8%	6.2%	3.6%	-8.7%	35.7%	17.1%	16.6%
Revenue by business segments (weighting %)							
Europe	39%	40%	40%	42%	42%	42%	42%
North America	32%	30%	29%	26%	25%	23%	21%
China	19%	20%	22%	22%	23%	25%	26%
Australia	10%	10%	8%	9%	9%	9%	10%
Others	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 34: Projected profit & loss statements (FY17 to FY23F), estimate by CGS-CIMB Research

FYE 31 Dec (HK\$m)	FY17	FY18	FY19	FY20	FY21F	FY22F	FY23F
Revenue	2,181	2,315	2,400	2,190	2,971	3,479	4,055
Cost of sales	(1,120)	(1,236)	(1,247)	(1,100)	(1,412)	(1,619)	(1,849)
Gross profit	1,062	1,079	1,153	1,090	1,559	1,859	2,206
Other income	23	11	13	25	15	17	18
Selling and marketing expenses	(266)	(275)	(294)	(251)	(321)	(379)	(438)
Administrative expenses	(587)	(631)	(616)	(556)	(624)	(696)	(771)
Other expenses	(2)	(13)	(17)	(1)	(6)	(7)	(7)
Operating profit	231	172	239	307	624	795	1,009
Net finance cost	(28)	(51)	(37)	(32)	(23)	(16)	(12)
Shares of associate co.	(1)	(2)	(1)	(2)	1	0	0
Extraordinary items	0	0	0	(149)	0	0	0
Profit before taxation	202	119	202	124	601	778	997
Taxation	(44)	(36)	(42)	(17)	(120)	(156)	(199)
Minority interests	(2)	2	1	0	0	0	0
Net profit	155	85	162	108	481	623	797
Core net profit	155	85	161	256	481	623	797
Growth (yoy%)							
Revenue	33%	6%	4%	-9%	36%	17%	17%
Gross profit	21%	2%	7%	-5%	43%	19%	19%
Operating profit	12%	-26%	39%	29%	103%	27%	27%
Net profit	55%	-45%	89%	-33%	346%	30%	28%
Recurring net profit	55%	-45%	89%	59%	87%	30%	28%
Ratio analysis (%)							
Gross margin	48.7%	46.6%	48.0%	49.8%	52.5%	53.4%	54.4%
Operating margin	10.6%	7.4%	9.9%	14.0%	21.0%	22.8%	24.9%
Net profit margin	7.1%	3.7%	6.7%	4.9%	16.2%	17.9%	19.7%
Recurring net profit margin	7.1%	3.7%	6.7%	11.7%	16.2%	17.9%	19.7%
Selling and marketing expenses to revenue ra	12.2%	11.9%	12.3%	11.5%	10.8%	10.9%	10.8%
Administrative expenses to revenue ratio	26.9%	27.2%	25.7%	25.4%	21.0%	20.0%	19.0%
SG&A cost to sales	39.1%	39.1%	37.9%	36.9%	31.8%	30.9%	29.8%
Taxation rate	21.9%	30.1%	20.6%	13.3%	20.0%	20.0%	20.0%
Dividend payout	29.5%	38.5%	32.2%	62.5%	39.0%	35.0%	35.0%
+/- change %							
Gross margin	-4.9%	-2.1%	1.4%	1.7%	2.7%	1.0%	0.9%
Operating margin	-1.9%	-3.2%	2.5%	4.1%	7.0%	1.8%	2.0%
Net profit margin	-1.0%	-3.4%	3.0%	-1.8%	11.3%	1.7%	1.8%
Recurring net profit margin	-1.0%	-3.4%	3.0%	5.0%	4.5%	1.7%	1.8%
SG&A to sales	-3.2%	0.0%	-1.2%	-1.1%	-5.1%	-0.9%	-1.1%

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Profit margin trend >

Gross profit margin trends in FY18-20. MDG’s gross profit margin (GPM) stayed around 49-50% in FY17-20, except in FY18 when it dipped to 46.6% in the first year following the acquisition of MicroDental which had a higher cost structure. MDG enjoyed a relative high GPM (we estimate over 60%) in the Europe and Australia markets, underpinned by low production costs in China and a strong brand name. Nevertheless, MDG achieved a lower GPM in the US market (we estimate at around 40-45%) compared with Europe as the majority of the dental prosthetic products were produced in the US lab. MDG has a relatively low GPM in China market (we estimate at around 35-45%) due to low ASP and keen competition.

GPM improvements over FY21-23F. We project GPM will improve from 49.8% in FY20 to 54.4% in FY23F, driven by faster revenue growth in the Europe and Australia markets and increase of shipment in digital solution cases. Given increasing digital solution cases adopting 3D printing which can save up to 2/3 of labour costs (a few and the last processes still need technician assistance), we estimate 3D printing overall will be able to save around 10% of total costs for products manufactured with 3D printing. We expect 3D printing for dental prosthetic manufacturing in MDG will increase from c.10% in FY20 to c.35% in FY23F and will drive a c.2% pts GPM expansion in the next three years (FY20-FY23F) (Figure 35).

Sustainable EBITDA margin and net profit margin improvement over FY21-23F. SG&A expenses as a percentage to total sales was 36.9% in FY20. We estimate operational efficiency in the US will continue to improve in FY21-23F on accelerating revenue growth. Nevertheless, we believe the selling and marketing expenses to sales ratio will remain at around 11% in FY21-23F (11.5% in FY20) due to fast-growing intraoral scanner sales and clear aligner “TrioClear” promotion in the distribution network.

We expect selling and marketing expenses to sales ratio to decrease from 11.5% in FY20 to 10.8% in FY23F and administrative expenses to decrease from 25.4% in FY20 to 19.0% in FY23F.

We project EBITDA margin will gradually improve from 20.2% in FY20 to 28.9% in FY23F, driven by a 4.6% pts GPM expansion from higher contribution from digital solutions cases and fast growth of the high-margin markets (Figure 35).

Figure 35: Margins trends (FY17-23F), estimate by CGS-CIMB research

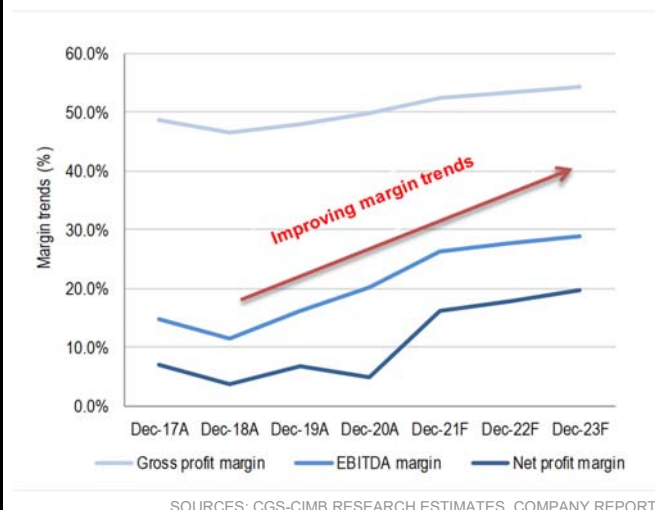
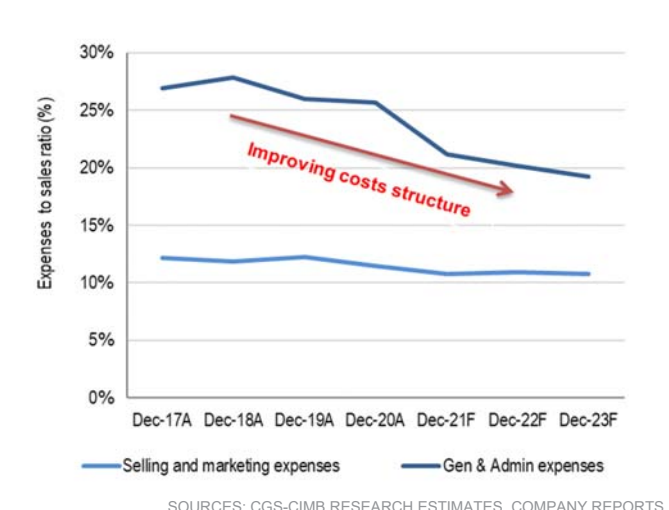


Figure 36: Expenses to sales ratio (FY17-23F), estimate by CGS-CIMB research



Balance sheet and cash flow ➤

We expect MDG to turn net cash in FY21-23F. MDG has a healthy balance sheet with 7% net gearing in FY20, improving from c.22%/20% in FY18/FY19, thanks to strong free cash flow in FY18-20. MDG generated HK\$81m/HK\$199m/HK\$334m free cash flow in FY18/FY19/FY20. As at 31 Dec 2020, MDG had net debt HK\$163m, of which it had cash of HK\$698m and bank borrowings of HK\$861m. We estimate MDG turning to net cash of HK\$170m in FY21F and growing its cash balance to HK\$1.08bn in FY23F, thanks to its robust EBITDA in FY21-23F (Figure 37).

Capital expenditure in FY21F and FY22F. We estimate capex of approximately HK\$110m in FY21F as the company plans to expand its production capacity in Dongguan. The company plans to double its capacity from 1,500 technicians in FY20 to c.3,000 technicians in FY22F with a total investment of approximately HK\$100m. MDG is also setting up production facilities in Vietnam for c.200 technicians for an investment of approximately HK\$30m. The new lab will commence production in 2Q22F.

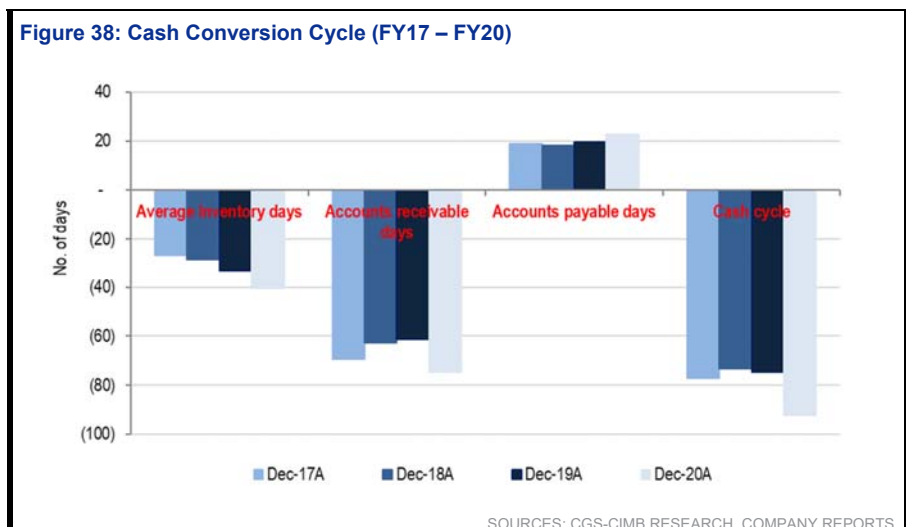
We estimate total capex will be approximately HK\$110m in FY21F and HK\$130m in FY22F.

Figure 37: Cash Projection (FY17 - FY23F), estimate by CGS-CIMB research

FYE 31 Dec (HK\$ m)	Dec-17A	Dec-18A	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
EBITDA	231	172	239	307	624	795	1,009
Less : Change in working capital	(74)	(10)	(12)	(19)	(146)	(94)	(108)
Less : Capital expenditure	(191)	(141)	(139)	(72)	(110)	(130)	(80)
Less : Taxation	(44)	(36)	(42)	(17)	(120)	(156)	(199)
Free cash flow	(79)	(15)	47	199	247	415	621
Dividend paid	(46)	(33)	(52)	(67)	(188)	(218)	(279)
Net (debt) / cash	(349)	(429)	(408)	(163)	152	530	1,083
Cash and equivalents	369	380	394	698	752	1,000	1,429
Total borrowings	(717)	(809)	(802)	(861)	(600)	(470)	(346)

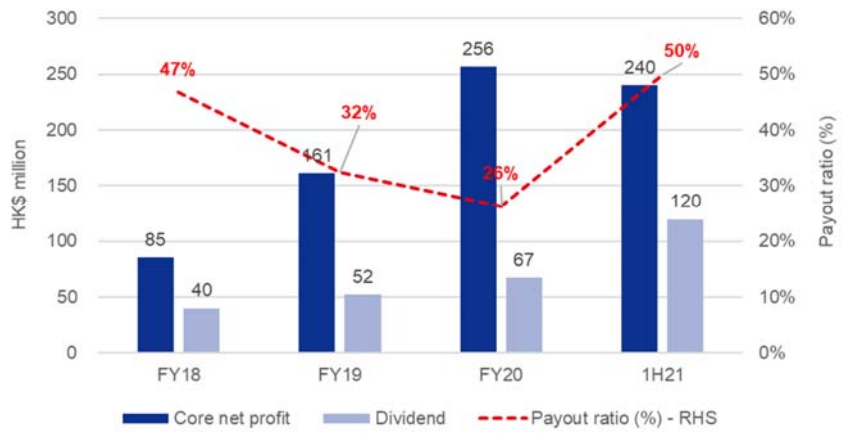
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

MDG had over 70 days cash conversion cycle in FY17-FY20. MDG generally grants overseas customers a credit period of 30 days and Chinese customers 30-90 days. Its account receivables days were around 2 months and inventory turnover days were 1 month in FY17-19. MDG lengthened inventory days in FY20 to 40 days (33 days in FY19) and receivables days to 75 days (61 days in FY19) which was exaggerated by a decrease in revenue in 1H20 amid by the Covid-19 pandemic. Given the strong business recovery in 2H20, the amount of inventory and account receivables returned to normal at the end-FY20 (Figure 38).



Dividend payout. In a similar vein, MDG has also returned a significant portion of its profits to shareholders, with a 32% average payout ratio in FY18-20.

Figure 39: Dividend payout ratio (FY18-1H21)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

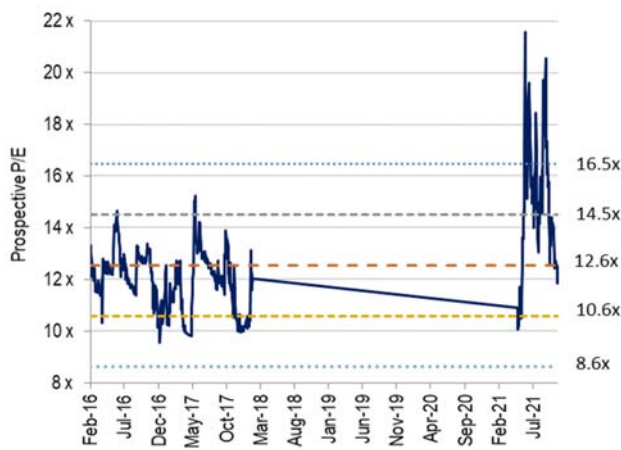
Valuation and recommendation

Initiate coverage with an Add and target price of HK\$10.35 ▶

MDG trades at a compelling valuation of c.10x CY22F P/E. MDG was trading at 8-10x prospective P/E in 2017-2020 on the back of a decline in FY18 net profit and a slowdown in revenue growth in FY17-20. During Jan-Oct 2021, MDG traded at 10-20x prospective P/E due to its sustained business recovery and continuous market share gains in 2H20 and 1H21.

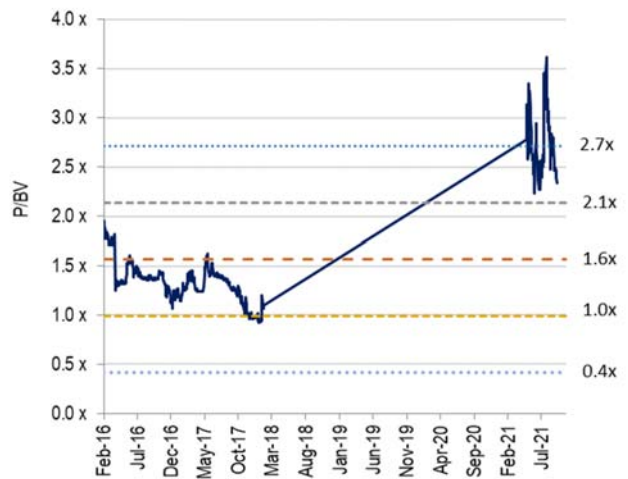
MDG currently trades at c.13x CY21F and c.10x CY22F P/E, which is attractive, in our view, due to its sustained market share gains in the dental prosthetic industry and accelerating EPS growth (47% core EPS CAGR in FY20-23F).

Figure 40: MDG's prospective P/E



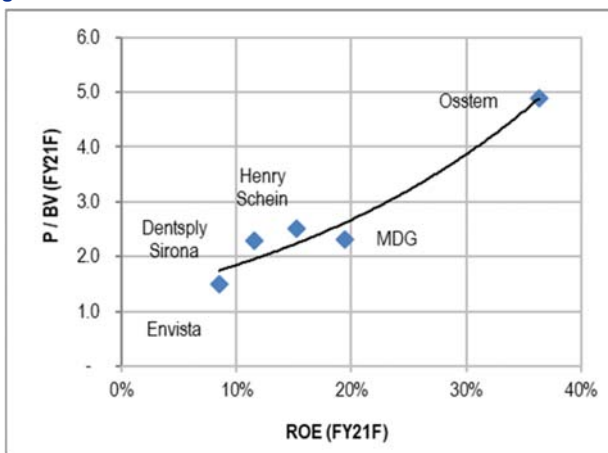
SOURCES: CGS-CIMB RESEARCH, BLOOMBERG

Figure 41: MDG's P/BV



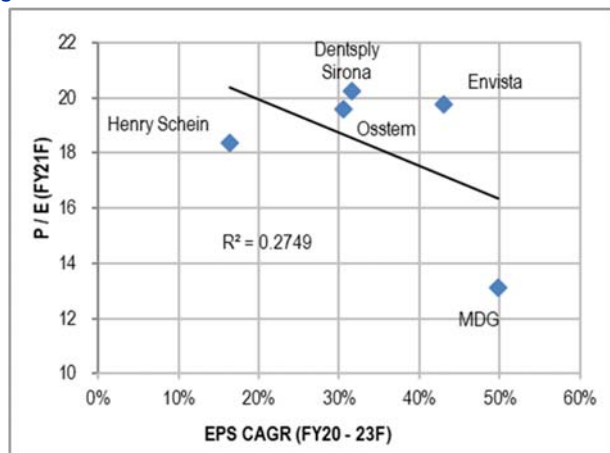
SOURCES: CGS-CIMB RESEARCH, BLOOMBERG

Figure 42: ROE vs. P/BV



SOURCES: CGS-CIMB RESEARCH, BLOOMBERG (PRICE AS AT 21 OCT 2021)

Figure 43: EPS CAGR vs P/E



SOURCES: CGS-CIMB RESEARCH, BLOOMBERG (PRICE AS AT 21 OCT 2021)

Initiate coverage with Add. We initiate coverage of Modern Dental Group (MDG) with an Add as we believe MDG will continue to gain market share amid the consolidation of the dental prosthetic market due to its well-established global coverage with connections with over 30,000 dentists/dental clinics and reputable brands (c.20 brands in Europe, the US, China, Australia and other countries).

Target price of HK\$10.35. We adopt the P/E method to value MDG, which is commonly used for dental and healthcare companies globally. Our target price of HK\$10.35 is based on 16x CY22F EPS of HK\$0.647, a 10% discount to the global dental lab and dental consumable supplier peers. This reflects its relatively short track record and modest market capitalisation. Our target price is equivalent to a PEG of 0.79x, 33% discount to its peers' 1.18x (Figure 44).

Figure 44: Peers comparison

Company	Code	Recom.	Price (local curr)	Target price (local curr)	Upside (%)	Market Cap (US\$m)	P/E (x) CY20	P/E (x) CY21F	P/E (x) CY22F	3-year EPS CAGR %	PEG (x)	P/BV (x) CY21F	P/BV (x) CY22F	ROE CY21F	ROE CY22F	EV/EBITDA (X) CY21F	EV/EBITDA (X) CY22F	Yield CY21F	Yield CY22F
Modern Dental Group	3600 HK	Add	6.54	10.35	58%	805	24.9	13.1	10.1	49.8%	0.50	2.3	2.1	19.4%	21.7%	8.0	6.1	3.0%	3.5%
Dental labs and dental consumable suppliers																			
Dentsply Sirona	XRAY US	Not Rated	58.28	N/A	N/A	12,737	37.4	20.2	18.1	31.6%	1.18	2.4	2.3	11.3%	11.5%	13.7	12.0	0.7%	0.7%
Henry Schein	HSIC US	Not Rated	79.01	N/A	N/A	11,037	26.2	18.4	17.5	16.4%	1.60	2.8	2.5	15.8%	15.2%	11.9	11.0	0.0%	0.0%
Ervista	NVST US	Not Rated	38.75	N/A	N/A	6,249	46.7	19.8	18.4	43.0%	1.09	1.6	1.5	9.0%	8.5%	12.5	11.2	0.0%	0.0%
Osstem Implant	048260 KS	Not Rated	141,100	N/A	N/A	1,710	26.2	19.6	16.1	30.6%	0.86	7.1	4.9	42.4%	36.3%	11.6	9.3	0.5%	0.5%
Average							34.1	19.5	17.5	30.4%	1.18	3.5	2.8	19.6%	17.9%	12.4	10.9	0.3%	0.3%
Dental clinics																			
Topchoice Medical Corporation	600763 CH	Not Rated	229.96	N/A	N/A	11,533	136.4	99.4	75.2	32.9%	4.15	25.5	19.1	26.2%	25.9%	66.8	50.6	0.0%	0.0%
Q&M Dental	QC7 SP	Not Rated	0.59	N/A	N/A	409	32.5	17.2	15.4	31.3%	1.04	4.5	4.0	28.0%	30.2%	9.7	9.8	5.8%	5.8%
Pacific Smiles Dental	FSQ AU	Not Rated	2.90	N/A	N/A	345	63.0	30.9	145.0	30.2%	2.08	7.1	7.5	31.3%	5.5%	14.2	25.8	2.3%	0.7%
Average of regional peers							77.3	49.1	78.5	31.5%	2.42	12.4	10.2	28.5%	20.5%	30.2	28.8	2.7%	2.2%
Clear aligner providers																			
Align Technology	ALGN US	Not Rated	599.49	N/A	N/A	47,367	126.4	54.5	45.1	51.4%	2.46	12.7	10.8	23.7%	23.3%	39.5	32.3	0.0%	0.0%
Straumann	STMN SW	Not Rated	1,852.0	N/A	N/A	32,117	124.0	71.9	58.3	36.1%	3.43	19.7	15.6	29.1%	29.7%	47.1	40.5	0.4%	0.5%
Angelalign Technology	6699 HK	Not Rated	322.2	N/A	N/A	6,975	210.3	137.5	114.5	47.0%	4.47	18.7	16.0	16.2%	18.0%	N/A	N/A	0.0%	0.0%
Average of regional peers							153.5	87.9	72.6	44.8%	3.46	17.0	14.1	23.0%	23.6%	43.3	36.4	0.1%	0.2%

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, BLOOMBERG (PRICE AT AS 21 OCT 2021)
Note: All forecasts for Not rated companies are based on Bloomberg consensus estimates

Our DCF valuation for MDG is HK\$10.76 per share. We also value MDG through a discounted cash flow (DCF) methodology to cross-check our primary valuation, for which we have estimates until FY30F. We use an average WACC of 8.2% and a terminal growth rate of 2% (estimate based on the dental prosthetic industry growth rate) and arrive at DCF per share of HK\$10.76. Figure 45 below is our DCF analysis summary.

Figure 45: Discounted cash flow

FYE Dec (HK\$ m)	Dec-17A	Dec-18A	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F	Dec-24F	Dec-25F	Dec-26F	Dec-27F	Dec-28F	Dec-29F	Dec-30F	Terminal
Revenue	2,181	2,315	2,400	2,190	2,971	3,479	4,055	4,461	4,907	5,398	5,506	5,616	5,728	5,843	5,960
Operating expenses	(1,950)	(2,144)	(2,161)	(1,883)	(2,347)	(2,684)	(3,047)	(3,351)	(3,687)	(4,055)	(4,136)	(4,219)	(4,304)	(4,390)	(4,477)
EBIT	231	172	239	307	624	795	1,009	1,110	1,221	1,343	1,369	1,397	1,425	1,453	1,482
Plus : Depreciation/Amortization	90	95	153	136	159	167	163	177	174	175	177	178	181	183	186
Less : Change in working capital	(74)	(10)	(12)	(19)	(146)	(94)	(108)	(119)	(131)	(144)	(146)	(149)	(152)	(155)	(159)
Less : Capital expenditure	(191)	(141)	(139)	(72)	(110)	(130)	(80)	(148)	(162)	(179)	(182)	(186)	(189)	(193)	(197)
Less : Taxation	(44)	(36)	(42)	(17)	(120)	(156)	(199)	(219)	(241)	(265)	(271)	(276)	(282)	(287)	(293)
Free cash flow	11	81	199	334	407	582	784	802	861	930	947	964	982	1,001	16,515
Enterprise value (HK\$ m)															
Less : Net debt / (cash)															
Equity value (HK\$ m)															
Equity value - less minority															
Equity value per share (HKD)															10.76
Key assumptions															
WACC															8.2%
Terminal growth															2.0%

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Share price catalysts >

Valuation re-rating likely to continue.

We believe MDG's valuation re-rating will be catalysed by 1) fast penetration of digitalisation in its distribution network, 2) sustainable EBITDA expansion, and 3) rapid development of the clear aligner business.

Key risks >

Concentration of production facilities. MDG manufactures c.95% of dental prosthetic devices sold across the globe in Shenzhen and Dongguan (Mainland China). Centralising production facilities in Mainland China could worry investors, due to 1) the increase in labour and production costs in China and 2) any disruption in its supply chain caused by geopolitical conflicts. In response, the company is building a new production facility in Vietnam (expect to commence production in 2Q22F) and runs small production sites in different parts of the world to mitigate the risk.

Lower accessibility to dental prosthetics due to exclusion from public healthcare. In most jurisdictions, dental prosthetics are excluded from public healthcare because they are regarded as medical aesthetics. For example, Medicare, or Australia's universal health insurance scheme, does not cover most dental services. Therefore, accessibility to dental prosthetics rests to some extent on factors out of the company's control, especially consumers' disposable income.

Chinese government-led price cuts for drugs and medical devices. By central procurement, China has brought down the prices of 112 types of drugs and medical devices by 54 percent, as of 2020. Dental prosthetics are not under China's central procurement programme yet, but we observe a series of precursors, as portended by Ningbo Municipal Medical Insurance Bureau's "Plan on Further Clarification of Medical Insurance Account Payment for Dental Implant Projects (Draft for Comment)". Once dental devices are added in the price control list, MDG's margins in the China market are likely to be hurt.

In the near term, the company can minimise the price impact, thanks to its relatively smaller sales exposure to China market (c.22% of FY20 revenue). In the long run, lower prices will be balanced out, or even overcome, by larger volumes. In fact, price cuts will likely serve as a fortuitous catalyst to drive dental consumption in China market going forward, in our view.

Impairment of goodwill and intangible assets. As a result of frequent M&A activities, or around 10 M&A since the company was listed in Dec 2015, goodwill accounted for c.34% of MDG's total assets in FY20. Accordingly, any impairment on goodwill will potentially translate into opex and hence, compromise margins and profits.

Company background

A leading global dental prosthetic device provider >

Modern Dental Group (MDG) is a leading global dental prosthetic device manufacturer. Modern Dental Group (MDG) was founded in Hong Kong in 1986 and was listed on the Hong Kong Exchange in 2015. The company is a global leading dental prosthetic device provider, in term of no. of cases, focusing on custom-made prostheses. It provides two key products, namely fixed prosthetic devices and removable prosthetic devices.

MDG has built a wide global distribution network through M&A. MDG has expanded substantially through M&A in the past 10 years, growing its global distribution network and providing services to 20 countries and over 30,000 customers, namely dentists and dental clinics, around the world. As a result, the company has lined up reputable dental brands in its distribution network, including Labocast in France, Permidental in Germany, Elysee Dental in the Netherlands, Southern Cross Dental in Australia, YangZhijing in China, and MicroDental in the US.

MDG diversifies its production facilities beyond Greater China. Currently, MDG manufactures over 95% of dental prosthetics in Shenzhen and Dongguan (Mainland China) and ships them overseas, including to Europe, Australia and Hong Kong. In order to diversify its global production mix, the company is building a new production site in Vietnam and is poised to commence its operations in FY22F. Meanwhile, MDG also operates smaller production facilities overseas in Germany, Australia, the US and Madagascar, for proximity to customers and rapid turnaround.

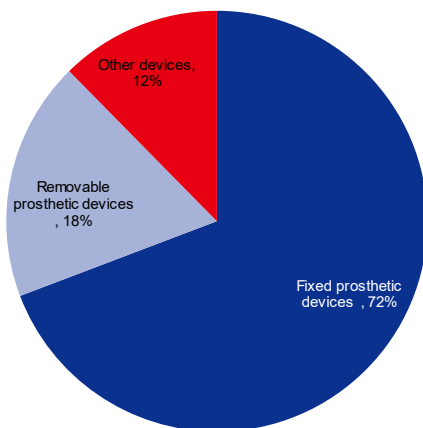
Revenue breakdown by product and geography >

Product breakdown. In FY20, MDG's revenue came from fixed prosthetic devices (72.2%), removable prosthetic devices (19.2%) and other devices (8.6%), as shown in Figure 46. Fixed and removable prosthetic devices are the company's revenue drivers.

Meanwhile, MDG is expanding its product portfolio with new consumer products, namely TrioClear aligners launched in 1Q20 in Hong Kong, in 2Q20 in Australia, and in 3Q20 in Europe.

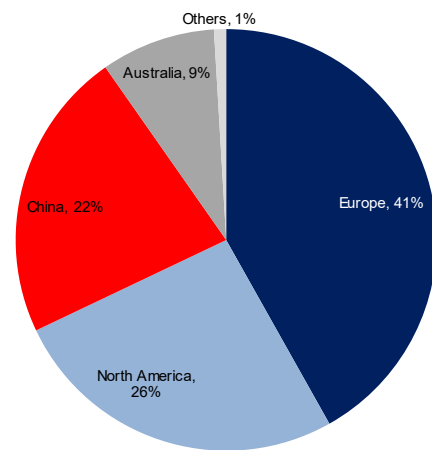
Geographic breakdown. MDG has exposure to diverse geographic markets. In FY20, Europe contributed c.42% of total revenue, North America c.26%, Greater China c.22%, and Australia c.9% as shown in Figure 47.

Figure 46: Revenue breakdown by product segments (FY20)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 47: Revenue breakdown by geography (FY20)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 48: Modern Dental Group brand portfolio as at 30 Jun 2021

Brand Name	Logo	Geographic Coverage	Acquisition Date
Modern Dental Laboratory		Hong Kong	Established in 1986
Yangzhijing		Mainland China	Set up in 1998
Modern Dental USA		United States	Acquired in 2009
Labocast		France	Started doing business in 1996 and acquired in 2011
Digitek Dental		Hong Kong, Macau	Set up in 2012
Permadental & Semperdent		Germany	Acquired in 2013
Quantum Dental (consolidated into MicroDental)		Canada	Acquired in 2013
Gold & Ceramics		Australia	Acquired in 2013
Sundance Dental (consolidated into MicroDental)		United States	Acquired in 2014
Labo Ocean Indien		France and Indian Ocean countries	Acquired in 2014
Elysee Dental		Netherlands, Belgium, Denmark, Norway, Switzerland, Spain, Sweden, Finland	Started doing business and acquired in 2014
Southern Cross Dental		Australia, New Zealand, Ireland	Started doing business and acquired in 2015
Andent Dental		Australia	Acquired in 2015 and consolidated under Southern Cross Dental
Precision Dental		New Zealand	Acquired in 2016
Genetory (consolidated into Southern Cross Dental)		Australia	Acquired in 2016
Ratiodental and Zahnmanufaktur		Germany	Acquired in 2016
MicroDental		United States	Acquired in 2016
Dentrade		Norway and Denmark	Acquired in 2016
CDI Dental AB		Sweden	Acquired in 2017
Schmidt		Denmark	Acquired in 2017
Modern Dental Singapore		Singapore	Set up in 2018
Modern Dental Taiwan		Taiwan	Set up in 2019
DD Dental		Germany	Acquired in 2019
TrioClear (Invisible Braces)		Australia, Belgium, Denmark, Finland, Germany, Hong Kong, Netherlands, New Zealand, Norway, Taiwan, Singapore, Spain, Sweden	Started doing business in 2020
Swift Dental		Australia	Acquired in 2021

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 49: Modern Dental Group milestones (1986 ~present)

1986	<ul style="list-style-type: none"> Established MDL in Hong Kong as a sole proprietorship to engage in manufacturing and distribution of dental prosthetic devices
1992	<ul style="list-style-type: none"> Acquired MDLCL to provide services to Hong Kong and overseas customers
1996	<ul style="list-style-type: none"> Commenced business relationship with the Labocast Group
1998	<ul style="list-style-type: none"> Established YZJSZ in Shenzhen to provide dental prosthetic devices in the Southern China market MDLCL obtained ISO 9001:2000 certification
2000	<ul style="list-style-type: none"> Commenced business relationship with the Permidental Group Commenced business relationship with the SDCL Group
2001	<ul style="list-style-type: none"> Commenced business relationship with the Elysee Group
2005	<ul style="list-style-type: none"> Moved production line to Shiling Industrial of Shenzhen
2006	<ul style="list-style-type: none"> MDLCL obtained ISO 13485:2003 certification for production and distribution of dental prosthesis
2007	<ul style="list-style-type: none"> YZJSZ was one of the recipients of the Top Ten Brands for Prosthetics in China YZJSZ received the China High Integrity Enterprise Excellence Award
2011	<ul style="list-style-type: none"> YZJSZ acquired YZBJB in order to develop its business in the Northern PRC market Acquired the Labocast group in order to develop its business in the French and Indian Ocean markets
2012	<ul style="list-style-type: none"> Incorporated Digiteck Dental in Hong Kong
2013	<ul style="list-style-type: none"> Set up European headquarters in the Netherlands Acquired Quantum Dental in order to develop its business in the Canadian market Acquired Gold & Ceramics in order to develop its business in the Australian market Acquired Permidental Group in order to develop its business in the German market
2014	<ul style="list-style-type: none"> YZJSZ was named Premium Brand and Model Enterprise for Manufacturing Business in Guangdong Province (Mainland China) Acquired Elysee Group in order to develop business in the Dutch, Belgian, Danish, and Spanish markets Set up production facility in Troy, United States
2015	<ul style="list-style-type: none"> Acquired SCDL Group in order to develop business in the Australian market Commenced operation of production facilities in Emmerich, Germany
2016	<ul style="list-style-type: none"> Acquired Cenetary to expand customer base and enhance local production, service, and support capacity in the Australian market Acquired Dentrade to expand sales and network in the Norwegian and German markets Acquired MicroDental to expand sales and network in the North American market Acquired Radiodental and Zahnmanufaktur to expand sales and network in the German market
2017	<ul style="list-style-type: none"> Acquired CDI to provide services to Swedish clients
2018	<ul style="list-style-type: none"> Set up Modern Dental Laboratory SG to provide customer and technical support
2019	<ul style="list-style-type: none"> Set up the Songshan Lake Production Facility in Dongguan Set up Modern Dental Laboratory TW to provide customer and technical support Entered a joint venture with Straumann to create Peak Dental Solutions Hong Kong Ltd Set up Pure Dental (Shenzhen) Co Limited in Shenzhen to provide educational programmes Set up Center of Dental Education in Hong Kong to provide international educational programmes
2020	<ul style="list-style-type: none"> Officially launched TrioClear in Germany, France, Netherlands, Australia, Singapore, Taiwan and Hong Kong
2021	<ul style="list-style-type: none"> Swift Dental Laboratory was acquired to expand the existing sales and distribution network in the Australian market

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Product overview ▶

MDG has three product lines, namely 1) fixed prosthetic devices, such as crowns and bridges, 2) removable prosthetic devices, such as removable dentures, and 3) other devices, such as orthodontic devices, sports guards, anti-snoring devices, dental equipment, and raw materials.

Fixed prosthetic devices include different kinds of crowns, bridges, and implant abutments, which are used for restorative dental procedures. In general, these devices can be affixed permanently to the patient's own dentition ("tooth-borne prosthetics") or alternatively to dental implants placed surgically within the patient's mouth ("implant prosthetics").

Crown is a fixed replacement for a single tooth, while bridge replaces several adjacent teeth. Custom implant abutments are installed to support the implant prosthetics. They are typically made of titanium, ceramics, or a combination of both (Figure 50 and 51).

Figure 50: Full process of dental treatment with fixed prosthetic devices

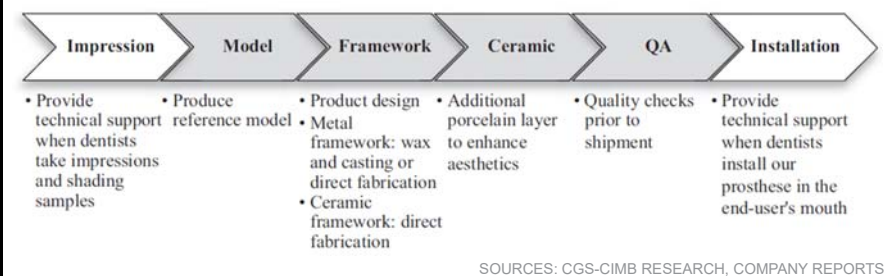


Figure 51: Fixed prosthetic devices



Removable prosthetic devices include dentures. These devices are not affixed to the patient’s mouth and can be removed as needed. They replace natural teeth by providing functional biting and chewing surfaces. A denture is made of dental resins, sometimes reinforced with a metal framework, in combination with artificial teeth (Figure 52 and 53).

Figure 52: Full process of dental treatment with removable prosthetic devices

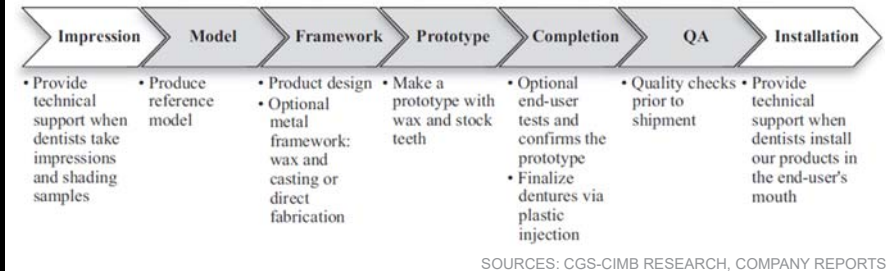
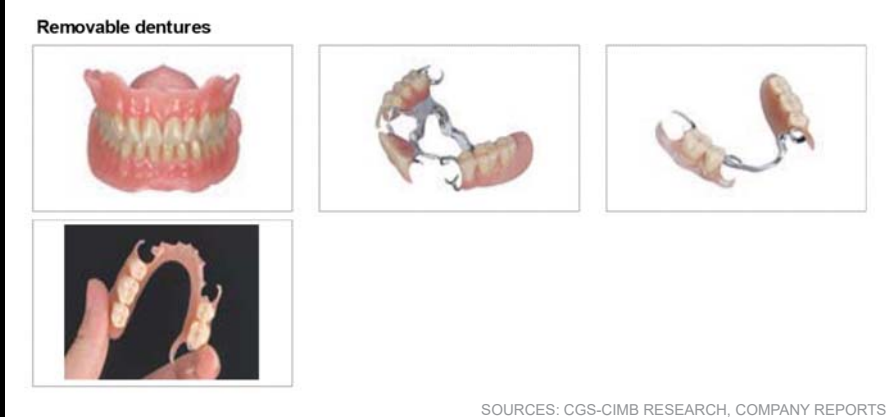


Figure 53: Removable prosthetic devices

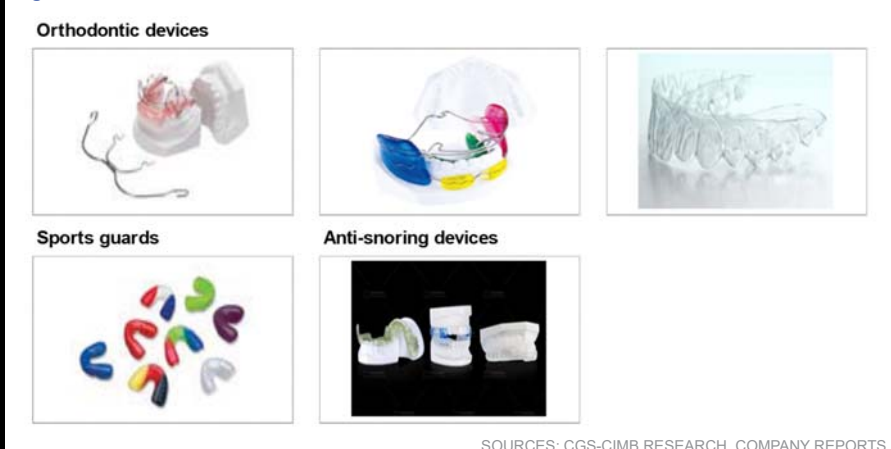


Other devices include orthodontic devices, sports guards, anti-snoring devices, raw materials, and dental equipment. Orthodontic devices, such as TrioClear, are used to correct certain deformities or to hold teeth in position after realignment.

Sports guards are made from an impact-resistant and shock-absorbent materials according to the exact dimensions of the user to prevent dental injuries.

Besides, different types of patient-specific anti-snoring devices, such as the EMA and the Moses device, work by holding the user’ lower jaws and tongues forward to provide more space to breathe and reduce snoring (Figure 54).

Figure 54: Other dental devices



Supply chain >

MDG is the midstream player in the global dental industry supply chain. MDG procures raw materials from upstream players, or well-recognised dental consumable suppliers in China, Europe, and the US. The company custom-makes dental products at its own dental labs and then delivers them to downstream players, or dental clinics and dental clinics. We note that it gains synergy when reaching out to downstream customers, thanks to a line-up of reputable global dental brands acquired over the years (Figure 55).



Capital exercises >

Listed on HKEX in Dec 2015. MDG was listed in the HKEX on 15 Dec 2015. The company issued 175m new shares at HK\$4.2 per share and raised c.HK\$ 735m in total.

M&A. Since its listing on HKEX in Dec 15, MDG has executed around 10 M&A to consolidate its market positions overseas, as described below:

- The company completed a 100% cash acquisition of Swift Dental Laboratory for A\$1.3m (HK\$7.8m) on 9 Jul 2021. Swift provides dentures for the Australian market.
- The company completed a 97.5% cash acquisition of DD Dental GmbH for €546,000 (HK\$4.8m) on 7 Nov 2019. DD Dental sells prosthetic devices in Germany.
- The company completed a 100% cash acquisition of CDI Dental AB and CDI Supply AB for €3.9m (HK\$34.2m) on 7 Feb 2017. CDI sells prosthetic devices in Sweden.
- The company completed a 100% cash acquisition of Schmidt Dentalkeramik ApS for €1.1m (HK\$9.7m) on 1 Jan 2017. Schmidt sells prosthetic devices in Denmark.
- In FY16 alone, the company implemented five M&A, including 1) MicroDental, or a dental lab in North America, 2) Dentrade, or a dental distributor in Germany and Norway, 3) Ratiidental and Zahnmanufaktur, or a dental distributor in Germany, 4) Cenetory, or a dental distributor in Australia, and 5) Precision Dental Laboratory, or a dental distributor in New Zealand.

Share buyback. MDG has actively executed share buybacks in the past three years, as demonstrated below:

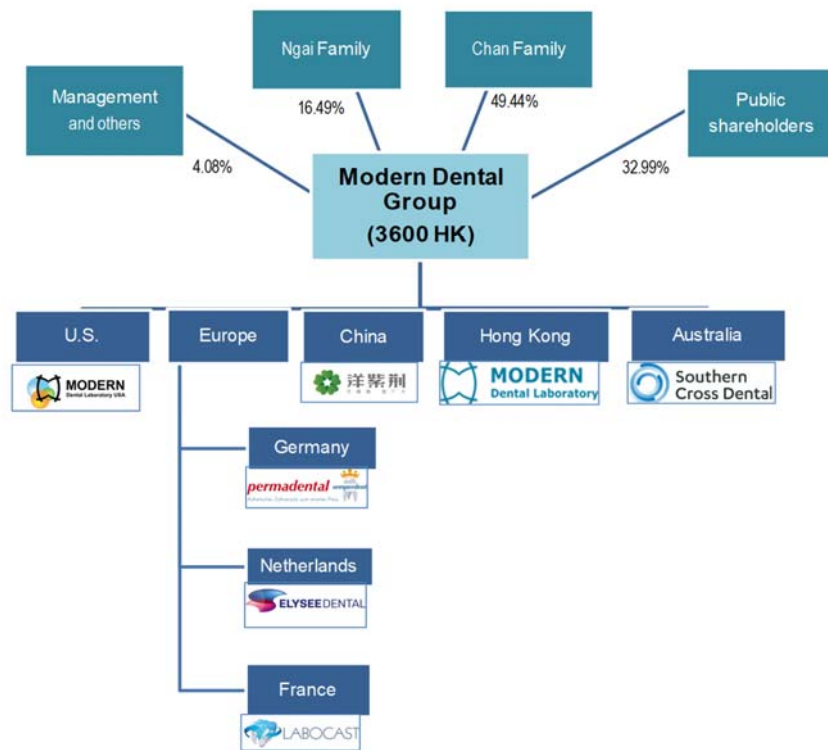
The company repurchased 3.3m shares for c.HK\$7.9m and cancelled 2.6m shares for HK\$7.0m in 1H21.

- The company repurchased 6.9m shares for c.HK\$9.9m and cancelled 4.6m shares for HK\$6.9m in FY20.
- The company repurchased 21.5m shares for HK\$30.8m and then cancelled 18.4m shares (6.9m shares repurchased in FY19 and 11.5m shares repurchased in FY18) for HK\$25.5m in FY19.
- The company repurchased 11.5m shares for HK\$16.4m in FY18.

Shareholding structure ►

The Chan family and Ngai family are the dominant shareholders with a c.66% stake in total, as of 30 Jun 2021. Mr. Chan Kwun-Fung and Mr. Chan Kwun-Pan (via Trieria Holdings Ltd) collectively hold a 49.44% stake in the company. Mr. Shing-Kin Ngai (via Prosperity Worldwide Investment Holdings Ltd) hold a 10.22% stake. Mr. Chi-Ho Ngai Alwin (via NCHA Holdings Ltd) hold a 6.58% stake (Figure 56).

Figure 56: Shareholding structure (as of 30 Jun 2021)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Key management ►

Dr. Chan Ronald Yik Long (陳奕朗醫生) serves as the chairman and executive director. Dr. Chan, aged 34, is the son of Mr. Chan Kwun Pan (retired as the vice chairman in Mar 2021). He joined the group in 2014 as an executive director. Dr. Chan is responsible for the development of corporate strategic plans and implementation of policies in the Group. Furthermore, he is the director and CEO of the Group's clear aligner business which also entails responsibilities from global strategic planning to product research and development. Dr. Chan has been a member of The Hong Kong Dental Association as well as a registered dentist in Hong Kong, under the general register, with The Dental Council of Hong Kong since 2014. He is also a part-time lecturer employed by The University of Hong Kong since June 2019. Dr. Chan obtained a Bachelor of Science degree (majoring in biological science) with distinction from the University of Calgary in Canada in June 2008, a Bachelor of Dental surgery degree from The University of Hong Kong in December 2014, a Master of Business Administration degree with distinction from Edinburgh Business School, Heriot-Watt University in the United Kingdom in June 2015 and a Master of Science degree in Restoration Aesthetic Dentistry from The University of Manchester in July 2019.

Mr. Ngai Chi Ho Alwin (魏志豪先生) is the vice chairman, executive director and chief operating officer. Mr. Ngai, aged 43, is the son of Mr. Ngai Shing Kin (executive director and chief operating officer). He joined the group in 2006 as an executive director and the chief operating officer of the company. Mr. Ngai has over 14 years of experience in the dental prosthesis field. He is primarily responsible for the general operations and devising business strategies of the Group. Prior to joining the Group, he was a solicitor of Ian Polak Barristers & Solicitors, being a law firm, from January 2003 to December 2005. Mr. Ngai obtained an executive master of business administration (EMBA) degree from the City University of Hong Kong in October 2018, a master's degree in applied commerce (marketing) from the University of Melbourne in Australia in March 2006 and a bachelor's degree in laws and a bachelor's degree in science (with honors) from the University of Melbourne in Australia in April 2002. He was admitted as a barrister and solicitor of the Supreme Court of Victoria in Australia in November 2002.

Mr. Chan Kwun-Fung (陳冠峰先生) retired as the chairman in Mar 2021 and remains as an executive director. Mr. Chan, aged 66, has been a director since Jul 2012 and designated as an executive director and chairman since Jun 2015. He is a dental technician with over 30 years of experience in dental prosthesis. He joined the company (previously "Modern Dental Laboratory") as a partner in Nov 1991. Note he is related to senior management members, including Mr. Kwun-Pan Chan, Mr. Chi-Yuen Chan (executive director), Dr. Yik-Long Chan (executive director), and Ms. Yik-Yu Chan (executive director).

Mr. Chan Kwun-Pan (陳冠斌先生) retired as the vice chairman in Mar 2021 and remains as an executive director. Mr. Chan, aged 63, founded Modern Dental Laboratory in Aug 1986 and is the brother of Mr. Kwun-Fung Chan, or the chairman. Overall, he is an experienced dental technician with a career spanning over 30 years of career in dental prosthesis. He obtained a craft certificate in dental mechanics from the Hong Kong Polytechnic University ("PolyU") in Nov 1975.

Mr. Ngai Shing-Kin (魏聖堅先生) is an executive director and the CEO of the company. Mr. Ngai has over 53 years of experience in dental prosthesis. Prior to joining the company in Apr 1996, he served as a dental technician in Department of Health, HKSAR from 1970 to 1979. He was then a dental technology lecturer at two institutions, namely the PolyU from 1979 to 1981 and the Faculty of Dentistry, the University of Hong Kong from 1981 to 1998. He obtained a master's degree in management (technology) from the University of Melbourne in Dec 1994. Note he is related to Mr. Chi-Ho Ngai (executive director).

Mr. Chan Chi Yuen (陳志遠先生) is an executive. Mr. Chan, aged 36, joined the Group in 2011 and is the son of Mr. Chan Kwun Fung (retired as the chairman). He has been a director since 22 September 2014 and has been designated as an executive Director since 19 June 2015. Mr. Chan is primarily responsible for the business development, customer services and daily operations of Yangzhijin Dental Laboratory (Shenzhen) Co., Ltd. Mr. Chan obtained a diploma in business administration (majoring in accountancy) from the Southern Alberta Institute Technology in Canada in June 2009.

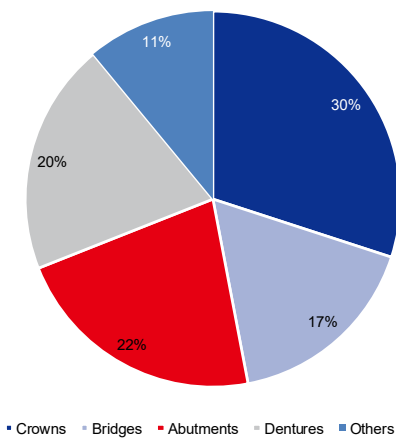
Ms. Chan Yik Yu (陳奕茹女士) is an executive director and the chief marketing officer. Ms. Chan, aged 33, joined the Group in 2014 and is the daughter of Mr. Chan Kwun Pan (vice chairman) and sister of Dr. Chan Ronald Yik Long (executive director). She has been a director since 22 September 2014 and has been designated as an executive director since 19 June 2015. Ms. Chan is primarily responsible for the overall marketing of the Group. Ms. Chan possesses over 10 years of experience in the marketing field. Prior to joining the Group, Ms. Chan was a marketing executive of the business corporate department of Fiducia (Hong Kong office), a management consultancy firm, and then worked at Goodwin Procter LLP, a solicitor firm, as a marketing specialist. Ms. Chan obtained a bachelor's degree in commerce from the Haskayne School of Business, University of Calgary in Canada in June 2010.

Appendix I – Dental prosthetics market outlook

Overview of the global dental prosthetics market ▶

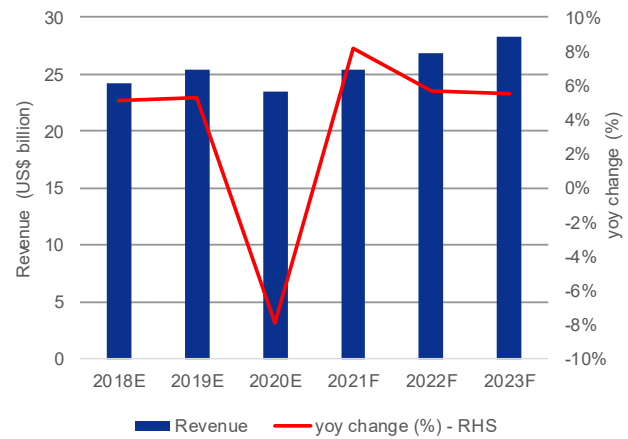
We estimate that the total addressable dental prosthetics market is segmented in terms of product type into crowns (c.30%), bridges (c.17%), abutments (c. 22%), dentures (c.20%), and others (c.11%, Figure 57). The total market size amounted to c.US\$23.8bn in 2020, according to our estimates based on the Roland Berger data. Roland Berger estimates global dental prosthetic market, in term of revenue, to reach c.US\$28.7bn in 2023F, with c.6.5% CAGR in 2020-23F (Figure 58). In our view, such a stable market growth is driven by 1) an ageing population, 2) public oral health awareness, and 3) per capita disposable income growth.

Figure 57: Global dental prosthetics mix in 2020, estimates by CGS-CIMB Research



SOURCES: CGS-CIMB RESEARCH, ROLAND BERGER

Figure 58: Global dental prosthetics market size (2018-2023F)

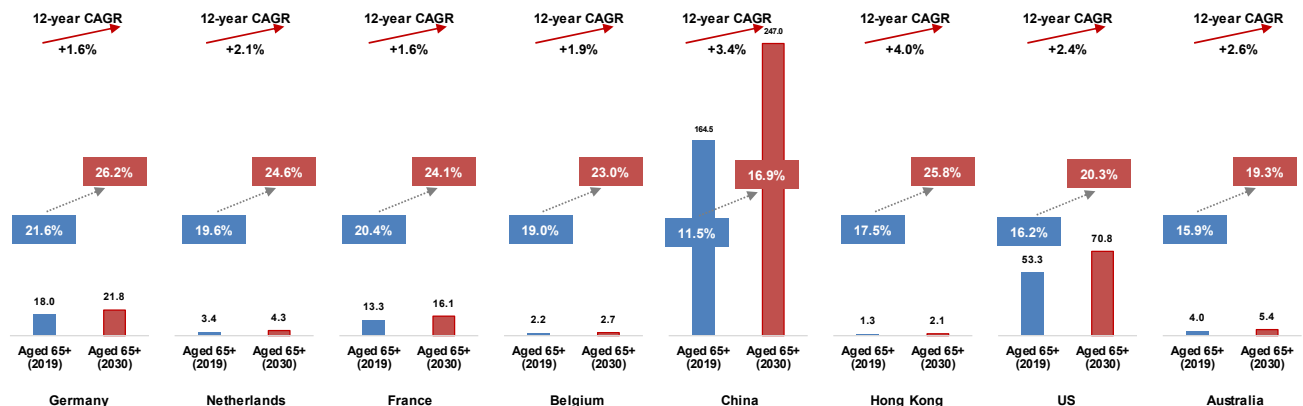


SOURCES: CGS-CIMB RESEARCH, ROLAND BERGER

Market driver 1: Ageing population. MDG’s key markets, such as the US, Europe, China and Australia, are countries and regions with rapidly ageing populations. According to the United Nations (UN), the global median age is expected to increase by 3.4 years by 2030F, when half of the world’s population would be over 33 years of age. The UN estimates that c.37% of the population in East and Southeast Asia will be aged 65 years and above in 2050F. In addition, some 19% of the population of Europe and the US will be aged 65 years and above in 2050F, according to the same source (Figure 59).

Ageing leads to higher demand for dental prosthetics, in our view, the demand for prosthetics, such as dentures, is positively correlated with the increase in populations aged 65 years and above.

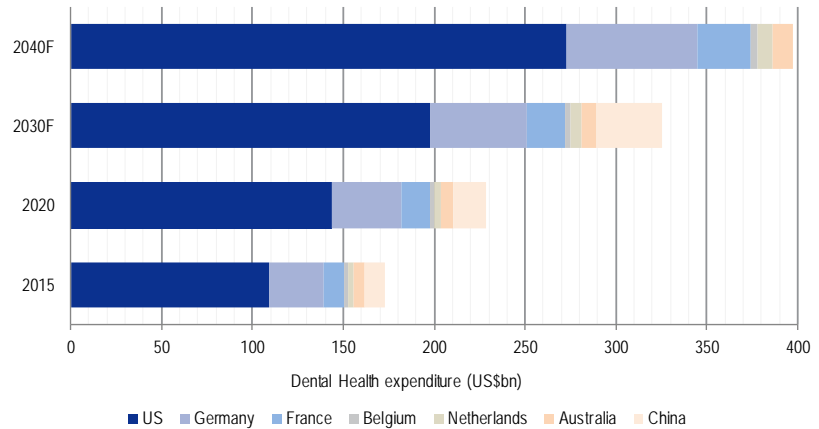
Figure 59: Population of 65 years and over by country (in million for bar chart)



SOURCES: CGS-CIMB RESEARCH, UNITED NATIONS

Market driver 2: Public oral health awareness. Regardless of the availability of public dental healthcare coverage, dental expenditure per capita has steadily increased in MDG’s key markets, thanks to growing oral health awareness (Figure 60).

Figure 60: Expenditure on dental healthcare

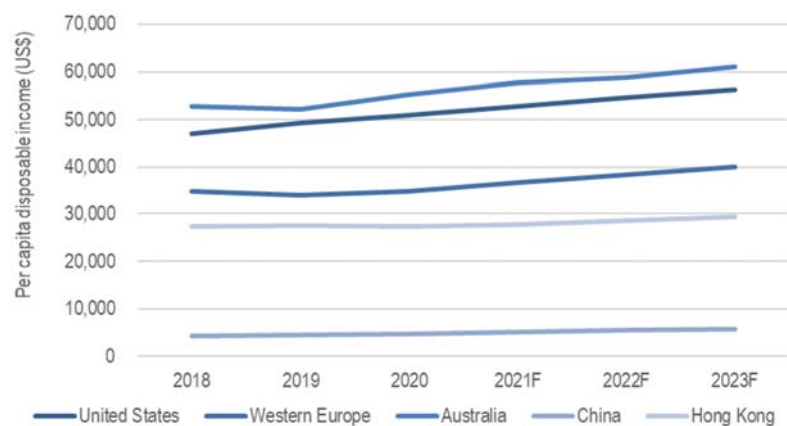


SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Market driver 3: Per capita disposable income growth. Since dental care is not fully covered in public healthcare in many countries, dental expenditure depends a lot on personal disposable income. Many data houses provide upward projections for per capita disposable income in countries where MDG operates its dental prosthetic business. According to Fitch Solutions and National Statistics, for example, per capita disposable income is expected to grow steadily in regions, namely the U.S. with a c.3.4% CAGR in 2020-23F, Western Europe with a c.4.6% CAGR, Australia with a c.3.4% CAGR, Mainland China with a c.6.6% CAGR, and Hong Kong with a c.2.5% CAGR over the same period (Figure 61).

Synergised with other market drivers, in our view, per capita disposable income growth will contribute to higher dental expenditure.

Figure 61: Per capita disposable income (2018-23F)

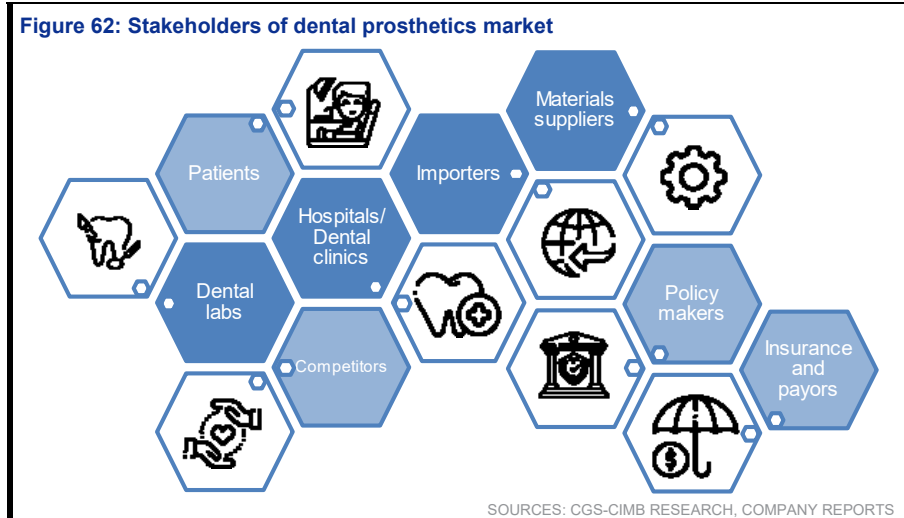


SOURCES: CGS-CIMB RESEARCH, NATIONAL STATISTICS, FITCH SOLUTIONS

Dental prosthetics market value chain ▶

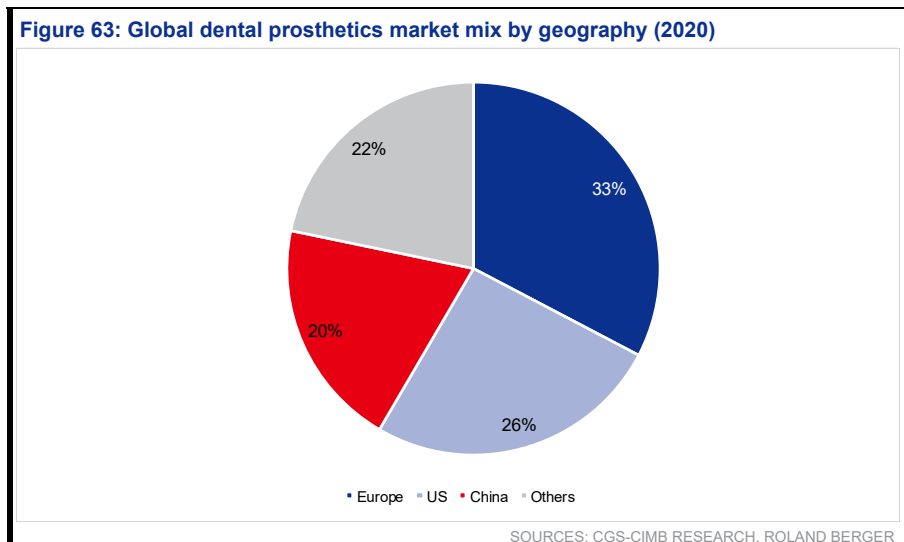
Dental prosthetics market value chain. The four main stakeholders along the dental prosthetics value chain include hospitals, or dental clinics, dental laboratories, importers, and material suppliers (Shown in figure 62).

Dental prosthetics devices are usually made by local dental laboratories or outsourced to importers, which manufacture the products in countries such as China, Turkey, and the Philippines. Due to the custom-made nature of dental products, communication between technicians in dental labs and dentists conditions accuracy and quality to a large extent.



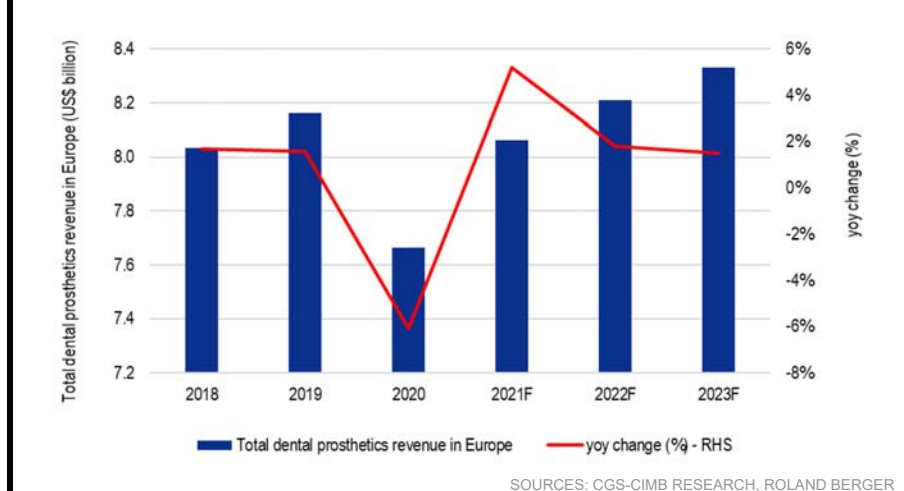
Key geographical markets: Europe, United States, and China▶

According to our observation, Europe, the US and China are the three largest dental prosthetics markets, in aggregate making up nearly 80% of the total global market share, according to Roland Berger (Figure 63). These geographical markets continue to grow, driven by three structural drivers, namely an ageing population, public oral health awareness, and per capita disposable income growth.



European market. Based on a Roland Berger estimate, the European dental prosthetics market recorded total revenue of c.US\$7.7bn in 2020. Having reached a mature growth phase, it is estimated to maintain flattish growth, with a c.2.8% CAGR in 2020-23F (Figure 64).

Figure 64: Dental prosthetics market (total revenue) in Europe (2018-2023F)

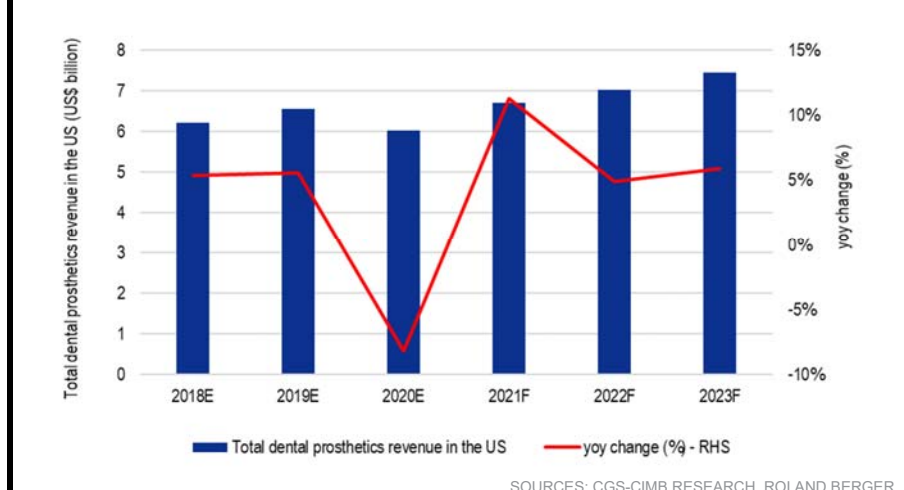


The US market. Based on Roland Berger figures and our estimates, the US dental prosthetics market was more badly hit by the pandemic than any other major geographical market. Accordingly, it recorded a total of c.US\$6bn revenue in 2020 with a -c.8.2% yoy decline.

Having said that, we estimate a robust rebound with c.7.3% CAGR over the next 3 years in 2020 to 2023F on the back of public dental healthcare, as well as the aforementioned three structural market drivers (Figure 65).

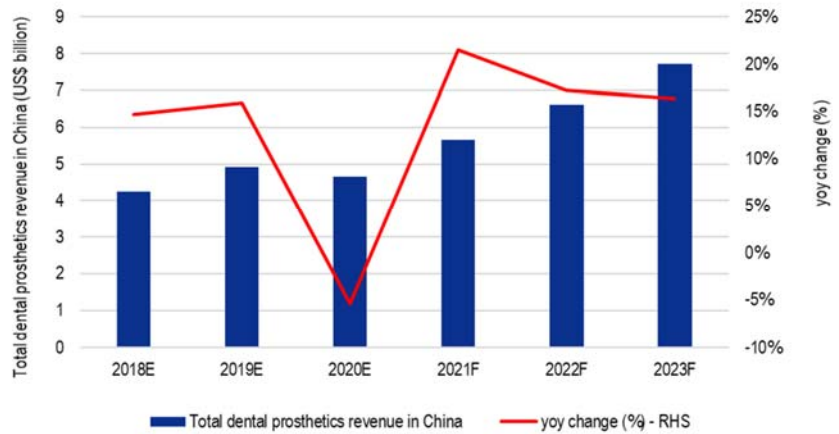
Note that over 23m people are likely to be covered under the Affordable Care Act for dental care in 2021F, which would contribute to the demand for dental prosthetics in the next few years.

Figure 65: Dental prosthetics market (total revenue) in the US (2018-2023F)

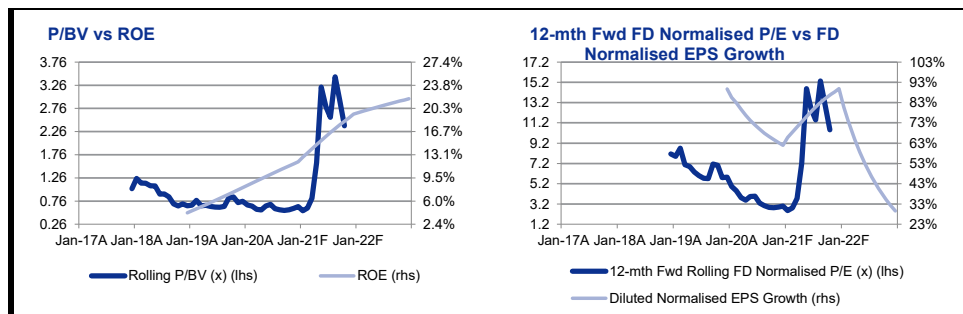


Chinese market. In our view, the Chinese dental prosthetics market would achieve the most robust growth of the world’s three key markets over the next few years. Based on our estimates, it generated a total of c.US\$4.7bn revenue in 2020 and would grow to c.US\$7.7bn in 2023F, with a c.18.3% 3-year CAGR, thanks to increasing penetration of dental services and insurance coverage, as well as the aforementioned three structural market drivers (Figure 66).

Figure 66: Dental prosthetics market (total revenue) in China (2018-2023F)



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

BY THE NUMBERS

Profit & Loss

(HK\$m)	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
Total Net Revenues	2,400	2,190	2,971	3,479	4,055
Gross Profit	1,153	1,090	1,559	1,859	2,206
Operating EBITDA	379	418	768	945	1,153
Depreciation And Amortisation	(153)	(136)	(159)	(167)	(163)
Operating EBIT	226	282	608	778	990
Financial Income/(Expense)	(24)	(8)	(8)	1	6
Pretax Income/(Loss) from Assoc.	(1)	(2)	1	0	0
Non-Operating Income/(Expense)	0	0	0	0	0
Profit Before Tax (pre-EI)	202	273	601	778	997
Exceptional Items	0	(149)	0	0	0
Pre-tax Profit	202	124	601	778	997
Taxation	(42)	(17)	(120)	(156)	(199)
Exceptional Income - post-tax					
Profit After Tax	160	108	481	623	797
Minority Interests	1	0	0	0	0
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Preference Dividends (Australia)					
Net Profit	162	108	481	623	797
Normalised Net Profit	160	256	481	623	797
Fully Diluted Normalised Profit	161	256	481	623	797

Cash Flow

(HK\$m)	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
EBITDA	378.6	417.9	767.6	945.2	1,152.9
Cash Flow from Inv. & Assoc.					
Change In Working Capital	(11.8)	(19.2)	(146.1)	(94.2)	(107.9)
(Incr)/Decr in Total Provisions					
Other Non-Cash (Income)/Expense					
Other Operating Cashflow	54.9	51.7	39.2	33.5	31.5
Net Interest (Paid)/Received	(37.9)	(33.7)	(24.1)	(16.8)	(13.2)
Tax Paid	(41.6)	(16.6)	(120.2)	(155.7)	(199.3)
Cashflow From Operations	342.2	400.2	516.5	712.0	864.1
Capex	(138.7)	(72.4)	(110.0)	(130.0)	(80.0)
Disposals Of FAs/subsidiaries					
Acq. Of Subsidiaries/investments	(3.2)	5.6	0.0	0.0	0.0
Other Investing Cashflow	3.3	19.9	0.0	0.0	0.0
Cash Flow From Investing	(138.6)	(47.0)	(110.0)	(130.0)	(80.0)
Debt Raised/(repaid)	(10.0)	52.6	(260.6)	(130.0)	(124.0)
Proceeds From Issue Of Shares	(30.8)	(9.9)	0.0	0.0	0.0
Shares Repurchased					
Dividends Paid	(44.1)	(21.2)	(67.4)	(187.7)	(218.0)
Preferred Dividends					
Other Financing Cashflow	(99.2)	(78.2)	(24.1)	(16.8)	(13.2)
Cash Flow From Financing	(184.0)	(56.7)	(352.1)	(334.5)	(355.2)
Total Cash Generated	19.6	296.5	54.5	247.5	428.9
Free Cashflow To Equity	193.7	405.8	145.9	452.0	660.1
Free Cashflow To Firm	241.5	386.9	430.6	598.8	797.2

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

BY THE NUMBERS... cont'd

Balance Sheet					
(HK\$m)	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
Total Cash And Equivalents	394	698	752	1,000	1,429
Total Debtors	488	545	739	865	1,009
Inventories	115	128	164	188	215
Total Other Current Assets	25	20	20	20	20
Total Current Assets	1,023	1,391	1,676	2,074	2,673
Fixed Assets	693	682	696	718	743
Total Investments	10	1	1	1	1
Intangible Assets	1,606	1,528	1,528	1,528	1,528
Total Other Non-Current Assets	30	64	64	64	64
Total Non-current Assets	2,339	2,274	2,289	2,310	2,336
Short-term Debt	106	188	150	120	96
Current Portion of Long-Term Debt					
Total Creditors	268	298	383	439	501
Other Current Liabilities	102	115	71	255	318
Total Current Liabilities	476	601	604	814	916
Total Long-term Debt	696	673	450	350	250
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities	150	123	167	195	228
Total Non-current Liabilities	846	796	617	545	478
Total Provisions	16	11	11	11	11
Total Liabilities	1,339	1,409	1,232	1,371	1,405
Shareholders' Equity	2,019	2,239	2,724	3,004	3,595
Minority Interests	2	9	9	9	9
Total Equity	2,021	2,248	2,733	3,013	3,604

Key Ratios					
	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
Revenue Growth	3.6%	(8.7%)	35.7%	17.1%	16.6%
Operating EBITDA Growth	47.7%	10.4%	83.7%	23.1%	22.0%
Operating EBITDA Margin	15.8%	19.1%	25.8%	27.2%	28.4%
Net Cash Per Share (HK\$)	(0.41)	(0.17)	0.16	0.55	1.12
BVPS (HK\$)	2.05	2.33	2.83	3.12	3.74
Gross Interest Cover	5.95	8.37	25.25	46.29	75.24
Effective Tax Rate	20.6%	13.3%	20.0%	20.0%	20.0%
Net Dividend Payout Ratio	32.5%	26.3%	39.0%	35.0%	35.0%
Accounts Receivables Days	61.13	74.90	68.48	73.09	73.24
Inventory Days	33.11	40.47	37.78	39.75	39.83
Accounts Payables Days	19.67	22.90	19.97	21.01	21.05
ROIC (%)	9.2%	10.9%	23.8%	28.2%	36.8%
ROCE (%)	8.0%	9.5%	18.8%	22.8%	26.6%
Return On Average Assets	5.7%	7.5%	12.8%	14.9%	16.8%

Key Drivers					
	Dec-19A	Dec-20A	Dec-21F	Dec-22F	Dec-23F
Europe market revenue (yoy change %)	3.6%	-4.3%	36.0%	18.0%	15.0%
North America market revenue (yoy change %)	1.3%	-18.1%	28.0%	8.0%	8.0%
China market revenue (yoy change %)	12.9%	-7.2%	42.0%	23.0%	25.0%

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

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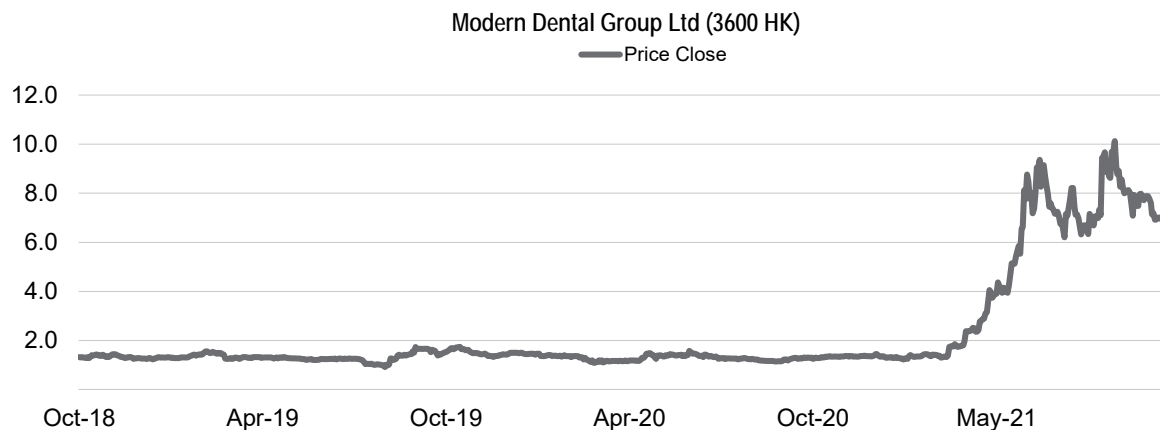
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Corporate Governance Report of Thai Listed Companies (CGR). CG Rating by the Thai Institute of Directors Association (Thai IOD) in 2020, Anti-Corruption 2020

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- Neutral** A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
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Definition:

- Overweight** An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
- Neutral** A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
- Underweight** An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.

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