

**MEDICAL DATA VISION CO., LTD (3902 JP)**

GROWTH FROM FY22 SUCH AS HMV BUSINESS RELIES ON SUCCESSFUL HIRING OF IT ENGINEERS

**FY21 RESULTS SUMMARY**

Medical Data vision [MDV] reported FY21 (Dec year-end) results with recurring profit [RP] of ¥1,592mil (+38.7% YoY) on sales of ¥5,672mil (+23.9% YoY). Sales growth accelerated compared to the past 5-year CAGR of 16.7% thanks to the strong performance from consolidated subsidiaries in the Data Network Service segment and ad-hoc services in the Data Utilisation Service segment.

<b>Earnings Summary</b>							
(¥mil)	FY20		FY21				
	1H	FY	1H	FYCE	FY	YoY (%)	vs. CE (%)
Sales	2,046	4,579	2,635	5,450	5,672	23.9	4.1
OP	475	1,146	720	1,402	1,594	39.1	13.7
RP	476	1,148	719	1,400	1,592	38.7	13.7
RPM (%)	23.3	25.1	27.3	25.7	28.1	+3.0pp	+2.4pp
NP	319	700	484	950	1,087	55.3	14.4
Dividend (¥)	n/a	3.6	n/a	5.0	5.6	55.6	n/a

Source: Nippon-IBR based on MDV's FY21 earnings results material

**PERFORMANCE BY SEGMENT**

MDV's business portfolio is largely divided into two business segments: 1) Data Network Service: With a one-off installation fee and a monthly subscription fee thereafter, the Data Network Service business provides data solutions to DPC hospitals – i.e., those with a Diagnosis Procedure Combination / Per Diem Payment System [DPC / PDPS] fee payment system, hereinafter referred to as DPC – to support their data management needs. MDV also has permission to reuse anonymised patient information (payment, age, prescription, medical treatment, etc), which supports its other key business:

2) Data Utilisation Service: Here, MDV provides data and research analysis services for pharmaceutical companies and medical research institutions.

**Data Network Service Segment**

FY21 segment sales rose 28.7% YoY to ¥2,061mil on the back of a sharp 95.0% YoY increase in revenue contributions from subsidiaries.

The segment is categorized into three subsegments as described below:

## 1. Flow revenue (initial fees etc)

MDV charges an initial fee when a hospital takes on its data solutions system. At the end of FY21, a total of 770 hospitals were using the firm's introductory solution EVE, a little less than the 772 hospitals as of the end of FY20. However, the firm has come to the stage where a rise in the number of users of solutions will not add extra value to its data bank. In FY21, the flow revenue from initial fees increased 14.0% YoY, thanks to one large DPC hospital group adopting EVE. In Q4 alone, the flow revenue rose +36.4% YoY and +134.9% QoQ.

Through the firm's system solutions, DPC data of 38.49mil acute stage patients in Japan, – equivalent of more than 32% of Japan's population –

**EXECUTIVE SUMMARY**

- Medical Data Vision's [MDV] FY21 (Dec year-end) recurring profit [RP] came in at ¥1,592mil (+38.7% YoY) on sales of ¥5,672mil (+23.9% YoY). In Q4 alone, recurring profit margin [RPM] reached 32.4%.
- Data Network Service Segment growth was largely led by contributions from acquired subsidiaries.
- The Data Utilisation Service Segment saw an increase in the number of customers as well as higher revenues from its top ten clients.
- MDV is guiding for FY22 GP of ¥5,029mil (+8.3% YoY) and RP of ¥1,600mil (+0.4% YoY) on sales of ¥6,300mil (+11.1% YoY). RP growth is much lower than that of sales due to a 34.5% YoY rise in R&D to ¥425mil for future growth. The earnings risk lies with MDV's ability to hire engineers with the required expertise.
- Between FY21~FY23, management assumes 3-year sales CAGR of 15~16% based on 1) a small but stable rise in revenue from Data Network Service, 2) near 15% CAGR of Data Utilisation Service, and 3) the expansion of new services in Data Utilisation Service.
- In FY25, MDV aims to achieve RP of ¥2,500mil on sales of ¥10,000mil. Details of the medium-term management plan for FY23~FY25 are yet to be announced.
- One promising focus of MDV's FY22 business strategy is Hyper Medical Vision [HMV], based on its proprietary ID linkage service PadBlock, that was developed by utilising blockchain technology. PadBlock will not only link medical data but various other data, therefore enabling MDV to develop a BtoBtoC service value chain.
- MDV's main shareholder return policy is an annual dividend pay-out ratio of 20%+.

has been accumulated in MDV's own data bank, Sakura Data Bank, and has the largest acute stage patient data, from which the firm creates various analytical and evidence-based solutions.

## 2. Recurring revenue (monthly subscription fees)

Recurring revenue is generated from monthly subscription fees from hospitals using MDV's DPC data solution packages. FY21 revenue was ¥886mil (-2.5% YoY).

## 3. New Business (Subsidiaries)

MDV saw a rapid increase in FY21 revenues (+95.0% YoY to ¥922mil) from subsidiaries. In Q4 alone, subsidiaries earned ¥238mil (+42.5% YoY / +3.9% QoQ). Revenue from Doctorbook, which became a subsidiary in FY17, increased some 50% up YoY thanks to strong demand for its video seminars for dentists (e.g., video instructions from renowned specialists). The subsidiary also started a similar service for clinicians. System Be-alpha, which provides systems for health checks to hospitals, also became a subsidiary in FY21 and is now included in this sub-segment.

Data Network Service New Sales Breakdown (Cumulative)													
(¥mil)	FY19				FY20				FY21				YoY (%)
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Data Network Total	359	733	1,144	1,514	404	762	1,136	1,602	552	1,007	1,501	2,061	28.6
Flow Revenue (initial fees)	105	221	342	407	65	109	145	220	68	107	151	252	14.5
Recurring Revenue (monthly subscription fees)	232	468	704	940	236	463	685	909	220	443	665	886	-2.5
New Businesses (subsidiaries)	21	43	97	166	102	189	304	472	262	455	684	922	95.3

Source: Nippon-IBR based on MDV's supplementary material FY21

Data Network Service New Sales Breakdown (Quarterly)															
(¥mil)	FY19				FY20				FY21				YoY (%)	QoQ (%)	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Data Network Total	359	373	411	370	404	358	373	465	552	454	494	560	20.4	13.4	
Flow Revenue (initial fees)	105	115	121	64	65	43	36	74	68	39	43	101	36.4	134.9	
Recurring Revenue (monthly subscription fees)	232	235	236	236	236	227	221	223	220	222	221	220	-1.3	-0.5	
New Businesses (subsidiaries)	21	22	53	69	102	87	114	167	262	192	229	238	42.5	3.9	

Source: Nippon-IBR based on MDV's supplementary material FY21

## Data Network Service KPIs

Indicators	FY2016 Results	FY2017 Results	FY2018 Results	FY2019 Results	FY2020 Results	FY2021 Results	FY2022 Targets
No. of hospital using 'EVE'	791	799	801	802	772	770	750~770
No. of hospitals using 'MDV Act'	-	-	-	-	-	558	1,000

Source: Supplementary Materials, Medical Data Vision published on 14 February 2022

### Data Utilisation Service

MDV's business model in Data Utilisation Service Segment focuses on providing various analytical services based on information collected through its Data Network Service solutions. The segment enjoyed FY21 revenue growth of 21.3% YoY to ¥3,610mil as demand for MDV's analysis services among pharmaceutical companies gained traction. Moreover, since pharmaceutical companies' medical representatives [MRs] cannot market medicine without evidence under the industry's compliance guidelines, nor can they visit hospitals freely due to COVID, demand for MDV's services rose. Gross profit margin [GPM] of the segment remained above 90% (90.6%) in FY21, as in FY20. KPIs of this segment are number of companies using the service and ARPU growth.

The segment offers two key services:

#### 1. Medical Data Survey Analysis (ad-hoc services)

With the data MDV has been given permission to collect and reutilise, the firm provides pharmaceutical companies ad-hoc research and analysis services. FY21 Ad-hoc service sales rose 18.6% YoY to ¥2,972mil thanks to (1) a rise in the number of users (+14.5% YoY to 118 companies, and (2) an increase in fees from its top ten customers by 18.2% YoY to ¥1,667mil. MDV also saw a higher number of direct requests from the HQs of non-Japanese pharmaceutical companies. COVID-related research also supported the boost in revenues. In Q4 alone, the ad-hoc revenue reached a quarterly record of ¥974mil (+16.5% YoY / +49.4% QoQ).

#### 2. MDV analyzer

This is a web-based system which analyses number of patients, prescription trends and dosing period in DPC hospitals. Pharmaceutical companies can access the system for an annual prescription fee of ¥20mil. FY21 revenues from this service rose 44.5% YoY to ¥578mil. In Q4 alone, MDV analyzer earned a record level of quarterly sales (¥175mil (+57.7% YoY / +11.5% QoQ)). The firm launched add-on functions to the service that improves the accuracy of sample data. This is achieved by using healthy population data received from insurance associations, and open data provided by the Ministry of Health, Labour, and Welfare [MHLW]'s database, which includes data on the elderly.

Data Utilisation Service Segment: Sales Breakdown by Service (Quarterly)														
(¥mil)	FY19				FY20				FY21					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	YoY (%)	QoQ (%)
Data Utilisation Total	509	543	559	899	638	645	733	960	877	750	822	1,159	20.7	41.0
MDV analyzer	88	96	96	95	96	94	98	111	114	130	157	175	57.7	11.5
Ad-Hoc	401	425	444	789	509	539	622	836	738	606	652	974	16.5	49.4
Subsidiaries	19	20	18	14	31	12	12	12	23	13	12	10	-16.7	-16.7

Source: Nippon-IBR Based on MDV's FY21 earnings results material

### Data Utilisation Service KPIs

Indicators	FY2018 Results	FY2019 Results	FY2020 Results	FY2021 Results	FY2022 Targets
No. of contracts (each type) for 'MDV analyzer'	25	25	27	44	50
No. of companies using medical data survey analysis	—	93	103	118	130
Sales from top 10 clients for medical data survey analysis (millions of yen)	—	1,221	1,410	1,667	1,800
No. of patients in MDV large-scale medical database (10,000)	2,593	2,984	3,451	3,849	—
No. of patients in Health Insurance Association database (10,000)	—	—	616	762	—

Source: Supplementary Materials, Medical Data Vision published on 14 February 2022

## FY22 OUTLOOK AND BUSINESS STRATEGY

MDV is guiding for FY22 GP of ¥5,029mil (+8.3% YoY) and RP of 1,600mil (+0.4% YoY) on sales of ¥6,300mil (+11.1% YoY). RP growth is much lower than that of sales because of the firm's plan to increase R&D by 34.5% YoY to ¥425mil for the future growth. Of the ¥627mil rise expected in absolute sales, COGS will likely rise ¥241mil, primarily due to an increase in subcontractor costs for product development, and a ¥183mil increase in personnel cost included in SG&A, to hire in-house IT engineers. The future growth relies on how successfully MDV can secure the engineers who ideally have knowledge in healthcare and develop solutions that improves the firm's proposals to customers.

### Data Network Service

MDV is guiding for Data Network Service GP of ¥1,270mil (-7.5% YoY) on sales of ¥2,068mil (+0.3% YoY). Key performance indicators [KPIs] for this segment are (1) the number of hospitals using EVE and (2) those using MDV Act. Patient data gathered from hospitals that use those services, and for which MDV has been given permission to store in its own database and use itself, plays a vital role in the firm's Data Utilisation Service business. The number of patients on its database rose from 38.49mil as of the end of FY21 to 39.12mil as of Feb 2022.

MDV Act is a cloud-based application through which hospitals can access to their main performance indicators at a single glance. It enables hospitals to analyse their performance more accurately if used in combination with EVE and Medical Code (a solution that supports more efficient management of a hospital by linking EVE). Currently, the firm offers MDV Act for free and assumes that in FY22, 1) the number of DPC hospitals that use EVE will remain stable between 750~770, and that 2) the number of hospitals that use MDV Act will increase to 1,000 hospitals from 558 in FY21.

Furthermore, the firm will roll out a cloud-based online health check and follow-up service, Alpha Salus in FY22. The number of hospitals using Alpha Salus will become another KPI for the segment. Data extracted from Alpha Salus will also add the data of healthy people that will enhance the accuracy of the sample data.

### Data Utilisation Service

MDV is guiding for FY22 Data Utilisation Service GP of ¥3,758mil (+14.9% YoY) on sales of ¥4,231mil (+17.2% YoY). The firm assumes that both KPIs – 1) the number of users of the firm's services, and 2) ARPU per customer – will be met as 1) the number of pharmaceutical companies using MDV analyzer is expected to rise from 44 in FY21 to 50 in FY22, along with the number of clients that use its ad-hoc services rising from 118 in FY21 to 130 in FY22, and 2) by increasing the frequency of use by customers. For example, the firm assumes revenue from its top ten customers will increase from ¥1,667mil in FY21 to ¥1,800mil in FY22 as they use the service more frequently.

### Business Strategy

For both Data Network Service and Data Utilisation Service, the firm will less likely engage in M&A, unlike it did in FY20 and FY21. The firm reckons that it has come to the stage where it has ample alliances with other companies to create services that add value to its customers. Management sees the need for these existing services to become cloud-based is an important step to develop further solutions. As such, MDV's Sakura Databank is fully cloud-based, enabling its services to have data links with other service providers and create new services.

MDV will focus on three key areas in FY22:

1. **Data Network Service:** Shift to a cloud-based operation which will enable the firm to create a pathway from health check data to Karteco, an information storage and browsing service used by patients. MDV also aims to solidify MDV Act.
2. **Data Utilisation Service:** The firm aims to expand data sales to customers, including overseas, and strengthen the insurance field. MDV appointed a new non-Japanese executive director to lead the overseas business. Moreover, as a new data utilisation business, the firm aims to generate revenue from the insurance field by 2025 through a tie-up with a non-life insurer of SBI Holdings (8473 JP), which will develop new insurance products by using medical data from MDV's databank.
3. **Hyper Medical Vision [HMV]:** MDV plans to invest ¥167mil (up from ¥99mil in FY20) on the HMV business, whose main feature will be to provide a data utilisation infrastructure via its proprietary blockchain PadBlock. The firm believes that a blockchain infrastructure is necessary to realise a society connected via various data. MDV aims to link not only medical and healthcare data through PadBlock but also other data such as insurance, fitness, life improvement app, merchandise, etc. Through the data infrastructure, the firm will be able to cultivate a BtoBtoC data service value chain.

MDV continues focus its investments on these areas over the FY22~FY23 period with the aim of achieving 3-year (FY21~23) sales CAGR of 15~16% on the back of 1) a stable revenue from Data Network Service, 2) near 15% CAGR in Data Utilisation Service sales, and 3) the expansion of new services in Data Utilisation Service. Although the firm is scheduled to officially announce its next three-year plan for FY23~FY25 within this fiscal year, MDV is hoping to achieve sales CAGR of some 20% and is targeting FY25 RP of ¥2,500mil or more on sales of ¥10,000mil.

**Shareholders Return**

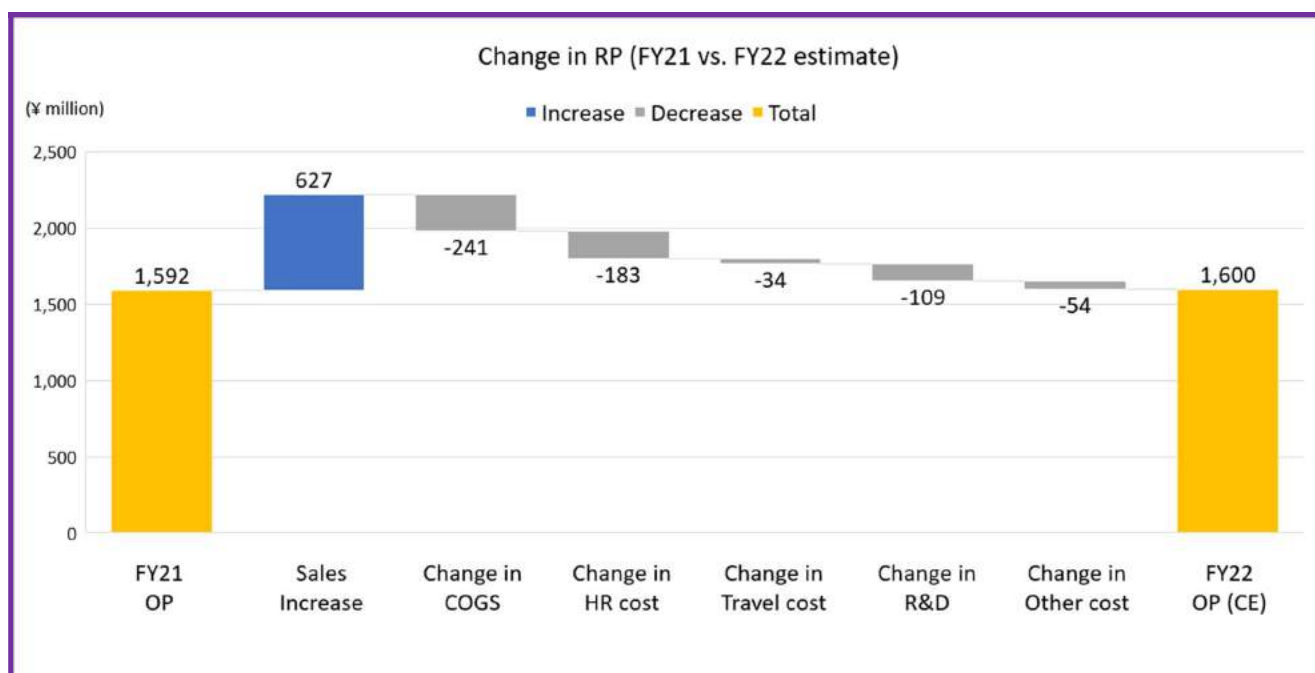
MDV’s shareholders return policy offers an annual dividend pay-out ratio of 20%+. Over the past two fiscal years, the firm also implemented share buybacks, ¥589mil in FY20 and ¥889mil in FY21, which saw total shareholder returns of 104.3% and 101.8% respectively. In FY22, the firm plans to maintain a pay-out of approx. 20%+ of net profit as an annual cash dividend.

Earnings Guidance Revision				
(¥mil)	FY20	FY21	FY22	
	FY	FY	FYCE	YoY (%)
Sales	4,579	5,672	6,300	11.1
OP	1,146	1,594	1,599	0.3
RP	1,148	1,592	1,600	0.4
RPM (%)	25.1	28.1	25.4	-2.7pp
NP	700	1,087	1,098	1.1
Dividend (¥)	3.6	5.6	6.0	7.1

Source: Nippon-IBR based on MDV’s FY21 earnings results material

R&D Breakdown		
(¥mil)	FY21	FY22
Existing Business (Evidence-based Medicine [EBM] function development, MDV Act, Alpha Salus etc.)	216	125
HMV Business (AI Blockchain Platform, Diabetes AI etc)	99	167
Others (new businesses, reserve fund)	0	132
Total	316	425

Source: Nippon-IBR based on MDV’s FY21 earnings results material



Source: Nippon-IBR based on MDV’s FY21 earnings results material

**APPENDIX****MDV's Core Services**

【Data network service】		
Product	Overview	Price
EVE	Analysis of charges/DPC fee gap, patient #s/stay length/resources by disease/condition, and benchmarking with other hospitals Uses benchmarks to identify user hospital's trends/strengths & weaknesses, helps with detailed investigation of treatment policy as core of hospital management	Installation: Y4mn Maintenance: Y50,000/mth.
Medical Code	Uses standardized format for DPC/elec. receipt data to support hospital management in areas like costing, raising treatment prices Unlimited user registration promotes smooth internal data sharing, change in awareness/actions to help improve management	Installation: Y8.2mn Maintenance: Y100,000/mth.
MDV Act	A cloud-based application that is the analytical gateway for existing products 'EVE' and 'Medical Code' and offers an at-a-glance view of key indicators for hospital management. Allows benchmarking against other institutions on various indicators for DCP hospitals, regional integrated community care facilities, and convalescent facilities	Free (rollout of paid functionality planned)
【Data utilization service】		
Product	Overview	Price
MDV analyzer	Online analysis tool allowing clients to easily examine data on patient numbers, prescription lengths/volumes using Japan's largest medical database Enables multifaceted analysis based on actual medical practice (surgery, testing) as well as disease and drug regimen	Y20mn/yr.
Medical data survey analysis	Provision of tailored reports in line with client's wishes	Avg. Y3.5-4mn per survey

Source: Supplementary Materials, Medical Data Vision published on 14 February 2022



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