

Medical Data Vision | 3902 |

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On **September 5**, 2016, Shared Research updated the report following interviews with Medical Data Vision (MDV) regarding Q2 FY12/16 results released by the company on August 8, 2016.

(JPY mn)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	% of FY Est.	FY CE
	Par.	Par.	Par.	Par.	Par.	Cons.				Cons.
Sales	478	954	1,687	2,414	519	1,037			34.5%	3,001
YoY	23.8%	22.2%	30.7%	23.7%	8.6%	8.6%				24.4%
Data network service	297	591	1,066	1,449	317	620			34.0%	1,822
Package	125	244	537	730	121	225			24.0%	938
Maintenance	171	346	529	719	195	394			49.0%	804
Data use and application service	180	362	620	963	201	415			35.3%	1,177
MDV analyzer	60	123	181	240	60	125			50.6%	247
Ad hoc analysis service	114	222	408	686	131	266			31.1%	855
Others	6	17	29	36	9	24			32.0%	75
YoY	-	-	-	-	-	-				-
Data use and application service	8.8%	6.5%	25.0%	19.5%	6.9%	4.9%				25.7%
Package	9.6%	4.7%	46.7%	31.1%	-2.9%	-7.8%				28.5%
Maintenance	7.5%	7.8%	8.8%	9.6%	13.9%	13.7%				11.8%
Data use and application service	62.2%	60.9%	42.2%	30.8%	11.5%	14.8%				22.1%
MDV analyzer	25.0%	21.8%	13.1%	11.6%	0.9%	1.5%				2.9%
Ad hoc analysis service	81.0%	79.0%	47.8%	31.7%	15.0%	19.8%				24.6%
Others	na	na	na	na	1	0				108.3%
CoGS	93	202	383	516	94	198				na
YoY	23.4%	21.2%	52.2%	34.2%	1.5%	-2.0%				na
CoGS / sales	19.4%	21.2%	22.7%	21.4%	18.1%	19.1%				na
Gross profit	385	752	1,304	1,897	425	838				na
YoY	23.9%	22.5%	25.5%	21.2%	10.3%	11.5%				na
GPM	80.6%	78.8%	77.3%	78.6%	81.9%	80.9%				na
SG&A expenses	364	781	1,204	1,615	413	846				na
YoY	28.0%	30.1%	26.9%	23.7%	13.7%	8.3%				na
SG&A expenses / sales	76.1%	81.8%	71.4%	66.9%	79.6%	81.6%				na
Personnel expenses	209	452	695	927	241	507				na
Other expenses	153	327	508	687	171	337				na
YoY	28.0%	30.1%	26.9%	23.7%	13.7%	8.3%				na
Personnel expenses	22.9%	26.3%	23.2%	20.5%	15.3%	12.2%				na
Other expenses	35.4%	35.7%	32.3%	28.4%	11.8%	3.1%				na
Operating profit	22	-29	100	282	12	-7			-2.4%	303
YoY	-19.5%	nm	11.3%	8.4%	-45.6%	nm				7.3%
OPM	4.5%	-3.0%	5.9%	11.7%	2.3%	-0.7%				10.1%
Non-operating profit / expenses	-1	-1	-2	-2	-1	-1				na
Recurring profit	21	-30	99	280	11	-8			-2.7%	303
YoY	-21.6%	nm	11.6%	12.7%	-46.6%	nm				7.3%
RPM	4.4%	-3.2%	5.8%	11.6%	2.2%	-0.8%				10.0%
Extraordinary profit / loss	-1	-1	-1	-18	-	-0				na
Taxes	10	-7	41	98	6	1				na
Net profit	11	-24	57	164	5	-10			-5.7%	174
YoY	-9.1%	nm	36.0%	21.1%	-50.6%	nm				6.5%
NPM	2.3%	-2.5%	3.4%	6.8%	1.0%	-1.0%				5.8%

Source: Shared Research based on company data

* Figures less than JPY1mn are rounded up (in figures released by the company, amounts less than JPY1mn were discarded). The company moved to consolidated results from Q2 FY12/16. Comparison between Q2 FY12/16 and Q2 FY12/15 is a simple comparison on a parent-only basis.

According to MDV's consolidated results for Q2 FY12/16, the company had sales of JPY1.0bn (+8.6% YoY in a simple comparison with individual results for Q2 FY12/15), operating loss of JPY7mn (operating loss of JPY28mn in Q2 FY12/15 based on individual results), recurring loss of JPY8mn (recurring loss of JPY30mn in Q2 FY12/15), and quarterly net loss of JPY9mn (quarterly net loss of JPY24mn in Q2 FY12/15). 1H sales were the highest recorded so far, and the company says the progress represented by 1H FY12/16 consolidated results is in line for it to meet its forecast for the whole of FY12/16. The company moved to consolidated results from Q2 FY12/16 to provide investors with more useful information as the importance of CADA Co., Ltd. (a wholly-owned subsidiary established in FY12/15) increases. Under the newly announced FY12/16 consolidated-basis forecast, consolidated sales and operating profit are each JPY1mn higher than the parent-only forecast previously announced.

Cumulative (JPY mn)	FY12/15				FY12/16				FY12/16 CE
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	Par.	Par.	Par.	Par.	Par.	Cons.			
Sales	478	476	733	727	519	518			3,001
YoY	23.8%	20.6%	43.8%	10.1%	8.6%	8.7%			24.3%
Data network service	297	294	475	383	317	303			1,822
Package	125	119	293	193	121	104			938
Maintenance	171	175	183	190	195	199			804
Data use and application service	180	182	258	343	201	214			1,177
MDV analyzer	60	63	58	59	60	65			247
Ad hoc analysis service	114	108	186	278	131	135			855
Others	6	11	12	7	9	15			75
YoY	-	-	-	-	-	-			-
Data use and application service	8.8%	4.3%	59.4%	6.4%	6.9%	3.1%			25.7%
Package	9.6%	0.0%	120.3%	1.0%	-2.9%	-12.6%			28.5%
Maintenance	7.5%	8.0%	10.9%	11.8%	13.9%	13.7%			11.8%
Data use and application service	62.2%	59.6%	22.3%	14.3%	11.5%	17.6%			22.1%
MDV analyzer	25.0%	18.9%	-1.7%	7.3%	0.9%	3.2%			2.9%
Ad hoc analysis service	81.0%	77.0%	22.4%	13.5%	15.0%	25.0%			24.6%
Others	na	na	na	na	1	0			108.3%
CoGS	93	110	180	134	94	104			na
YoY	23.4%	19.3%	113.7%	0.2%	1.5%	-4.9%			na
CoGS / sales	19.4%	23.0%	24.6%	18.4%	18.1%	20.2%			na
Gross profit	385	367	552	593	425	413			na
YoY	23.9%	21.0%	30.0%	12.6%	10.3%	12.7%			na
GPM	80.6%	77.0%	75.4%	81.6%	81.9%	79.8%			na
SG&A expenses	364	417	423	411	413	432			na
YoY	28.0%	32.0%	21.3%	15.3%	13.7%	3.6%			na
SG&A expenses / sales	76.1%	87.6%	57.8%	56.5%	79.6%	83.5%			na
Personnel expenses	209	243	243	232	241	266			na
Other expenses	153	174	181	179	171	166			na
YoY	28.0%	32.0%	21.3%	15.3%	13.7%	3.6%			na
Personnel expenses	22.9%	29.3%	18.0%	13.2%	15.3%	9.5%			na
Other expenses	35.4%	35.9%	26.6%	18.5%	11.8%	-4.6%			na
Operating profit	22	-51	129	182	12	-19			303
YoY	-19.5%	nm	67.5%	6.9%	-45.6%	nm			7.3%
OPM	4.5%	-10.6%	17.6%	25.1%	2.3%	-3.7%			10.1%
Non-operating profit / expenses	-1	-1	-2	0	-1	-1			na
Recurring profit	21	-51	129	182	11	-20			303
YoY	-21.6%	nm	70.8%	13.3%	-46.6%	nm			7.3%
RPM	4.4%	-10.8%	17.6%	25.0%	2.2%	-3.8%			10.0%
Extraordinary profit / loss	-1	0	0	-17	0	0			na
Income taxes	10	-16	47	58	6	-4			na
Net profit	11	-35	81	107	5	-15			174
YoY	-9.1%	nm	93.7%	14.4%	-50.6%	nm			6.5%
NPM	2.3%	-7.4%	11.1%	14.7%	1.0%	-3.0%			5.8%

Source: Shared Research based on company data

*Figures less than JPY1mn are rounded up (in figures released by the company, amounts less than JPY1mn were discarded). The company moved to consolidated results from Q2 FY12/16. Comparison between Q2 FY12/16 and Q2 FY12/15 is a simple comparison on a parent-only basis.

Comparing 1H progress toward the FY12/16 consolidated forecast for the full year, sales were at 34.5% (operating profit, recurring profit, and net profit/loss attributable to parent company shareholders are each deemed not applicable, since they were losses). Due to cyclical tendencies in the buying period for the Data Use and Application Service segment mainly by foreign-financed companies, MDV's profitability tends to be lower in Q1 and Q2 each year than in Q3 and Q4. In FY12/15, in terms of 1H (non-consolidated) progress toward the forecast (non-consolidated) for the full year, sales were at 36.4% (operating profit, recurring profit, and net profit/loss attributable to parent company shareholders were each deemed not applicable, since they were losses). The rate of progress toward the full-year forecast during 1H FY12/16 was lower than the rate of progress at the same time in FY12/15, but the size of the various losses shrank.

Sales analysis

Shared Research feels that one reason 1H progress toward the full-year forecast for FY12/16 (34.5%) was slightly lower than it was in FY12/15 (36.4%) is that payments for medical services were revised in 2016 (revisions occur every other year), since this means the medical institutions that are the company's clients will have been busy responding to the revision in April 2016. In particular, in the Data Network Service segment, packaged software sales in 1H FY12/16 came to JPY 225mn, down 7.8% YoY. As a result of concentrating sales resources on the highly profitable Medical Code* management support system for hospitals, the number of new users was up 60% compared with the same period last year, but sales of the diagnosis procedure combination ("DPC") analysis benchmark system, EVE,** were temporarily

affected by the revision of medical service payments (with implementation being pushed back because hospitals were busy responding to the revision). According to MDV, the number of inquiries from medical institutions about EVE has increased again since the beginning of Q3.

*System that analyzes cost management and other items related to hospital management overall. Installation cost: JPY8.1mn (including hardware); maintenance fee: JPY100,000 (per month)

**System that uses DPC data to analyze medical care treatment information and status at own hospital as compared to other hospitals. Installation cost: JPY4.0mn (including hardware); maintenance fee: JPY50,000 (per month)

In the Data Network Service segment, maintenance income for 1H FY12/16 came to JPY394mn (+13.7% YoY). Behind this double-digit growth is an increase in the number of hospitals using EVE and Medical Code (details below). As a result, total sales for the Data Network Service segment came to JPY620mn (+4.9% YoY) in 1H FY12/16.

In 1H FY12/16, sales for the Data Use and Application Service segment came to JPY415mn (+14.8% YoY). Of this, the company's ad hoc analysis service brought in JPY266mn (+19.8% YoY). MDV analyzer brought in JPY125mn (+1.5% YoY), and new business operations brought in JPY24mn (+46.4% YoY). Behind the strong growth of the ad hoc analysis service are vigorous efforts by the company to improve awareness of the service, including taking the stage at events, putting up displays at conferences, hosting seminars, and holding study meetings for the media. There have been cases in which one division of a pharmaceutical company uses MDV's ad hoc analysis service, but other divisions of the company are unaware of the service, which is why the company is putting a good deal of effort into raising awareness of the service in order to gain new customers and expand use to multiple departments within companies that are already customers. In addition, the reason that new business operations have seen such quick expansion is that the company developed new products aimed at the insurance industry tailored to that industry's needs, and sales in the new consumer healthcare industry were robust. For example, the company has begun offering the insurance industry fixed data sets specific to the field of cancer and has held a marketing workshop (with 37 participants from 24 major Japanese life and non-life insurers) in order to increase the number of accounts.

Cost analysis

Sales during 1H FY12/16 increased JPY82mn (8.6%) year-on-year. The CoGS declined JPY4mn, and the CoGS-to-sales ratio decreased 2.1pp, from 21.2% on a non-consolidated basis in 1H FY12/15 to 19.1% on a consolidated basis in 1H FY12/16. The reasons for this decrease were that sales of AceVision, which has a high CoGs-to-sales ratio, were booked during 1H FY12/15, and there was a change in the product mix in 1H FY12/16 (with sales of Data Use and Application products—which have a relatively low CoGS-to-sales ratio—comprising a larger share of overall sales).

SG&A expenses during 1H FY12/16 increased JPY65mn (8.3%) year-on-year, due to a JPY55mn (12.2%) increase in personnel expenses and a JPY10mn (3.1%) increase in various other expenses. The reasons for the increase in personnel expenses was an increase in the number of employees (160 at end June 2015 to 170 at end June 2016) as a result of aggressive hiring primarily for the Data Use and Application Service segment and an increase in personnel expenses per employee. The reason for the increase in various other expenses was an increase in outsourcing costs for updating medical databases. The SG&A-to-sales ratio decreased 0.2pp, from 81.8% on a non-consolidated basis in 1H FY12/15 to 81.6% on a consolidated basis in 1H FY12/16. The operating profit margin improved 2.3pp, from -3.0% on a non-consolidated basis in 1H FY12/15 to -0.7% on a consolidated basis in 1H FY12/16, due to the decreases in CoGS-to-sales and SG&A-to-sales ratios (2.1pp and 0.2pp respectively).

External environment

The Japanese government continues to reform the medical care system in the medical-related industry, MDV's core area of business. Japan's health services authorities are trying to encourage medical facilities to specialize in an effort to reach

medical and nursing goals for 2025 outlined in the government's unified social security and tax reforms. Specifically, the authorities are promoting a facility specialization report system that will make medical institutions report to their respective prefectural bodies the specialization of their facility and allow those institutions to voluntarily specialize. Based on population projections, the health services authorities will determine the need for hospitals with certain specializations for different regions. These circumstances continue to put medical institutions in a difficult position. The FY2016 revision of the medical services payment system emphasizes stricter requirements for the 7:1 patient-to-nurse staffing ratio for general wards, specialization of medical institutions, and improved home medical care.

*7:1 patient-to-nurse staffing ratio: This nursing system requires that at least one nurse must be on duty at all times for every seven inpatients. It is stricter than the current 10:1 patient-to-nurse ratio. Efforts to achieve advanced medical care and safety will allow hospitals to provide safer and more reliable nursing care. The 2006 revision of the medical services payment system established the 7:1 ratio.

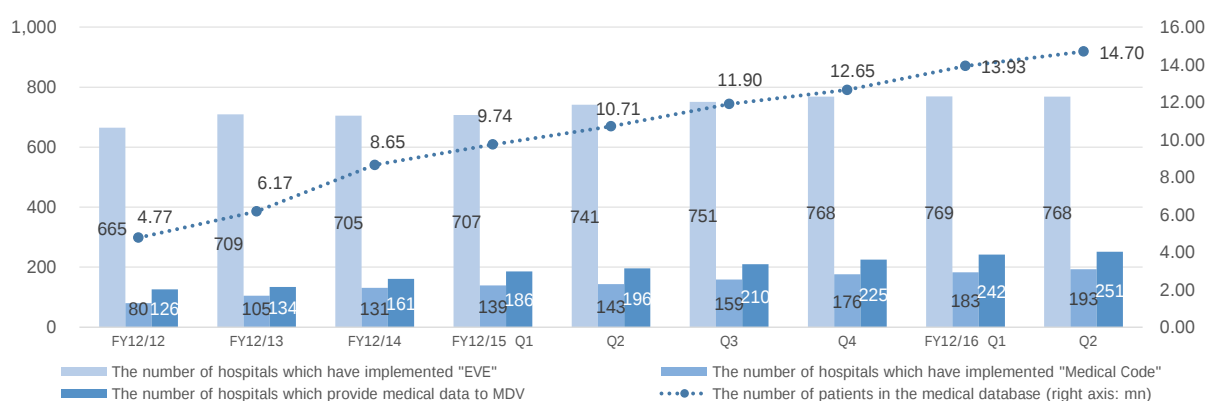
Number of companies using services and database size

The number of hospitals using MDV's services and the amount of data the company has accumulated with consent are growing due to the abovementioned changes in the external environment.

Specifically, as of the end of 1H FY12/16, the Data Network Service segment, which primarily sells packaged software for medical institutions, saw a total of 768 hospitals implement the DPC analysis benchmark system, EVE, and the company was in possession of benchmark data from some of the largest hospitals implementing DPC in the private sector. In addition, the segment saw a total of 193 hospitals implement the hospital management support system, Medical Code.

Even as the use of big data in medical-related industries is gaining attention, MDV had accumulated DPC data provided by 251 hospitals (representing 14.7mn patients) by the end of Q2 FY12/16, with consent for secondary use. As of the end of July, it is in possession of data on 15.0mn patients (roughly 1 out of every 9 people in Japan).

MDV provides use and application services for this medical big data to pharmaceutical companies, research institutions, and the over-the-counter and health and beauty care industries, but has also recently begun services aimed at the insurance industry.



Source: Shared Research based on company data

Business alliance with CSI, leading provider of electronic medical record systems

The same day MDV announced its results for 1H FY12/16 (August 8, 2016), it also announced that consolidated subsidiary CE Holdings (TSE1: 4320) would enter a business alliance with CSI Co., Ltd. ("CSI"), which develops and sells digital medical record systems. The aims of the alliance are to coordinate CSI's electronic medical record systems with MDV's own CADA-BOX (provisional name), to create a significant expansion of the user base for Karteko,** and to promote the

real-time collection of medical information (electronic medical records). At the same time, the alliance will benefit CSI by making its product line stand out from other companies' products.

*CADA-BOX (provisional name): added-value service that allows MDV's Karteko** and CADA*** to be used with existing electronic medical record systems from other companies

**Karteko: Web service that allows patients to view and manage a portion of their own medical information (medical records)

***CADA: ID card with a consultation ticket function. Since it has a payment function, patients are able to return home immediately after a medical consultation without the need to wait for accounting. CADA also allows payment in installments. Hospitals benefit since they are able to increase the number of patients they process (by at least 20%, according to MDV), reduce the amount of payments they are unable to collect, and reduce personnel expenses by reducing accounting staff. MDV's wholly-owned subsidiary CADA Co., Ltd., will develop its own system with credit and payment functions and will work to acquire CADA members.

CSI conducts development and sales of the MI·RA·Is Series of digital medical record systems for primarily medical institutions, and their systems have been adopted by 733 hospitals nationwide (as of end June 2016), making them a leader in the industry. At the same time, MDV has DPC data for 15.0mn patients or roughly 1 of every 9 people in Japan (as of end July 2016), but has been working on accumulating digital medical record data, since that data is both real-time and diverse.

By coordinating existing digital medical record systems with the company's Karteko Web service for patients using CADA-BOX (provisional name), MDV will be able to gather diverse medical information that patients have already given consent to in real time. For example, if a hospital has 300 beds, assuming a full turnover of inpatients at least twice a month, MDV would be able to gather information on 600 cases a month or 7,200 cases a year from that one hospital. The data volume would be even larger if the hospital's outpatients are also taken into consideration.

Shared Research views this business alliance positively, as it will allow MDV to cut costs and gather data more quickly compared to when implementing its service into hospitals all over Japan and collecting the digital medical record data alone. The company looks to generate profit from using and applying the gathered digital medical record data, rather than profit from sales of the digital medical record system.

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