

**MedTech**

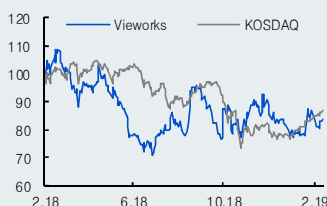
Results Comment  
February 19, 2019

(Maintain)	<b>Buy</b>
Target Price (12M, W)	<b>45,000</b>
Share Price (02/18/19, W)	33,900
Expected Return	33%

OP (18F, Wbn)	23
Consensus OP (18F, Wbn)	22
EPS Growth (18F, %)	4.7
Market EPS Growth (18F, %)	4.6
P/E (18F, x)	16.1
Market P/E (18F, x)	9.1
KOSDAQ	745.33

Market Cap (Wbn)	339
Shares Outstanding (mn)	10
Free Float (%)	70.1
Foreign Ownership (%)	33.1
Beta (12M)	0.40
52-Week Low	28,600
52-Week High	44,000

(%)	1M	6M	12M
Absolute	7.6	5.8	-17.9
Relative	0.5	9.6	-6.6



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# Vieworks

(100120 KQ)

## Imaging detectors key to growth in 2019

### 4Q18 review: Revenue tops consensus

For 4Q18, Vieworks posted revenue of W37.6bn (+18.4% YoY), topping our expectation. Medical device-related revenue grew strongly, with revenue from flat-panel digital radiography (FP-DR) and others up 3% and 1,714.0% YoY, respectively. Revenue from industrial vision systems also grew a robust 15.2% YoY. Operating profit came in at W7.1bn (+4% YoY; OP margin of 18.8%), slightly below the consensus.

### Waning volatility in key businesses and increasing traction in new businesses

**1) Medical detectors (FP-DR):** The global FP-DR market's game of chicken appears to be nearing an end. The OP margin of the market's no. 1 supplier (which drove ASP lower) has collapsed, going from 16.8% in 1Q16 to 3.1% in 3Q18, while many low-end Chinese suppliers are now being forced out of the market. Heightened trade disputes between the US and China have led to higher tariffs on US exports to China, adding to the pressures on many global companies

**2) Industrial vision systems:** The impact of unfavorable comparisons caused by panel makers' OLED capex cycle (which began in 2H16) has been fading since end-1H18. Because the business is based on orders, revenue still tends to be volatile. That said, it is encouraging that a major earnings overhang has been removed, and the introduction of foldable displays is raising expectations. We believe that time delay integration (TDI) line scan cameras, the company's next growth driver, are also slowly beginning to generate revenue growth.

**3) New businesses:** Thin-film transistor (TFT)-based RF detectors are considered one of the company's new growth engines. While they can be used for a number of applications, we think the high-growth dental sector, especially in China, holds the most promise. We believe that Vieworks will focus on quality and price competitiveness in order to penetrate the dental segment (which is dominated by CMOS detectors).

### Maintain Buy and TP of W45,000

We reiterate our Buy rating and target price of W45,000 on Vieworks. The stock currently trades at a 12-month forward P/E of 14.0x, a historical low and discount to global peers (15.7x).

Vieworks has grown over the years by continuously expanding into new areas, from CCD cameras to FP-DRs in 2012 and industrial cameras in 2016. Among the company's current new businesses, the dental detector segment looks the most promising. The dental detector business is exhibiting stable growth and is likely to determine the extent of earnings upside. Given that the company's margin structure has a low exposure to fixed costs, we think OP margin will recover sharply once top-line growth gains momentum.

FY (Dec.)	12/15	12/16	12/17	12/18F	12/19F	12/20F
Revenue (Wbn)	93	117	123	131	146	161
OP (Wbn)	18	30	29	23	29	34
OP margin (%)	19.4	25.6	23.6	17.6	19.9	21.1
NP (Wbn)	16	27	20	21	24	28
EPS (W)	1,589	2,697	1,963	2,054	2,369	2,785
ROE (%)	20.5	27.7	16.6	15.3	15.4	15.7
P/E (x)	28.0	22.2	20.8	16.1	14.3	12.2
P/B (x)	5.2	5.4	3.2	2.2	2.0	1.7
Dividend yield (%)	0.2	0.3	0.5	0.6	0.6	0.6

Note: All figures are based on consolidated K-IFRS; NP refers to net profit attributable to controlling interests  
Source: Company data, Mirae Asset Daewoo Research estimates

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**Table 1. 4Q18 review**

(Wbn, %, %p)

	4Q17	3Q18	4Q18P			Growth	
			Preliminary	Mirae Asset Daewoo	Consensus	YoY	QoQ
Revenue	31.7	33.8	37.6	35.8	34.8	18.4	11.3
Operating profit	6.8	7.0	7.1	7.3	7.1	4.0	1.8
OP margin (%)	21.4	20.6	18.8	20.4	20.4	-2.6	-1.7
Pretax profit	3.7	6.6	7.7	7.3	0.0	106.3	16.3
Net profit	4.0	5.6	5.3	5.6	0.0	32.9	-5.8

Notes: Based on consolidated K-IFRS; net profit is attributable to controlling interests

Source: Company data, FnGuide, Mirae Asset Daewoo Research estimates

**Table 2. Earnings forecast revisions**

(Wbn, W, %)

	Previous		Revised		% chg.		Notes
	19F	20F	19F	20F	19F	20F	
Revenue	146.6	161.9	145.7	161.3	-0.6	-0.4	Reflects 4Q18 earnings
Operating profit	30.7	34.5	28.6	33.6	-6.8	-2.7	
Pretax profit	30.7	34.5	28.8	33.9	-6.2	-2.0	
Net profit	25.3	28.4	23.7	27.9	-6.2	-2.0	
EPS (W)	2,526	2,841	2,369	2,785	-6.2	-2.0	

Notes: Based on consolidated K-IFRS; net profit is attributable to controlling interests

Source: Mirae Asset Daewoo Research estimates

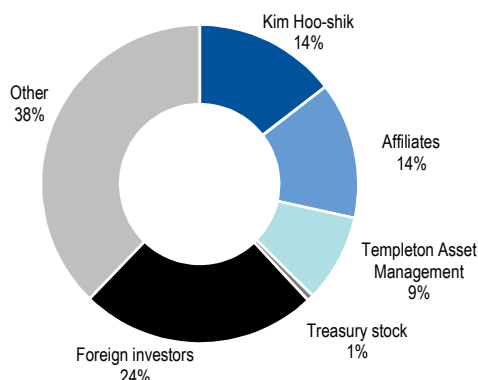
**Table 3. Quarterly and annual earnings**

(Wbn, %)

	1Q18	2Q18	3Q18	4Q18P	1Q19F	2Q19F	3Q19F	4Q19F	2018P	2019F	2020F
<b>Revenue</b>	<b>29.4</b>	<b>30.7</b>	<b>33.8</b>	<b>37.6</b>	<b>34.3</b>	<b>34.4</b>	<b>37.5</b>	<b>39.5</b>	<b>131.4</b>	<b>145.7</b>	<b>161.3</b>
FP-DR	16.5	13.7	16.7	19.0	17.0	14.1	17.0	19.4	65.9	67.4	71.3
Industrial cameras	10.3	14.2	13.1	12.7	12.4	15.2	14.2	14.3	50.4	56.1	62.7
Other	2.6	2.7	4.0	5.8	5.0	5.0	6.4	5.8	15.1	22.2	27.3
<b>Operating profit</b>	<b>4.1</b>	<b>4.4</b>	<b>7.0</b>	<b>7.1</b>	<b>6.7</b>	<b>6.7</b>	<b>7.4</b>	<b>7.8</b>	<b>22.5</b>	<b>28.6</b>	<b>33.6</b>
<b>Pretax profit</b>	<b>3.8</b>	<b>7.1</b>	<b>6.6</b>	<b>7.7</b>	<b>6.8</b>	<b>6.7</b>	<b>7.4</b>	<b>7.9</b>	<b>25.1</b>	<b>28.8</b>	<b>33.9</b>
<b>Net profit</b>	<b>3.2</b>	<b>6.4</b>	<b>5.6</b>	<b>5.3</b>	<b>5.6</b>	<b>5.6</b>	<b>6.1</b>	<b>6.5</b>	<b>20.5</b>	<b>23.7</b>	<b>27.9</b>
OP margin (%)	13.9	14.4	20.6	18.8	19.6	19.5	19.6	19.9	17.2	19.6	20.8
Pretax margin (%)	12.9	23.1	19.5	20.4	19.7	19.6	19.8	20.0	19.1	19.8	21.0
Net margin (%)	10.9	20.8	16.7	14.3	16.1	16.1	16.2	16.4	15.6	16.3	17.3

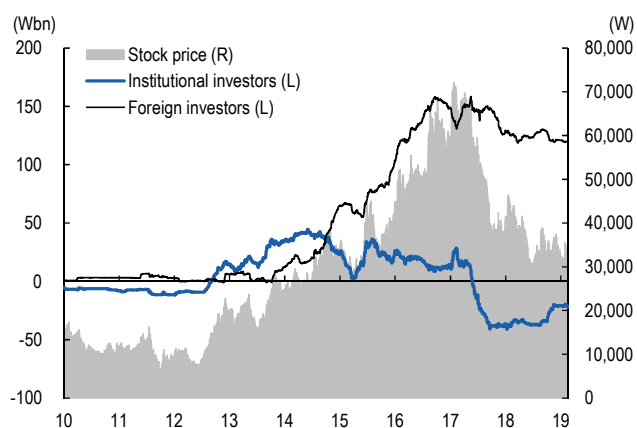
Source: Company data, Mirae Asset Daewoo Research estimates

Figure 1. Ownership breakdown



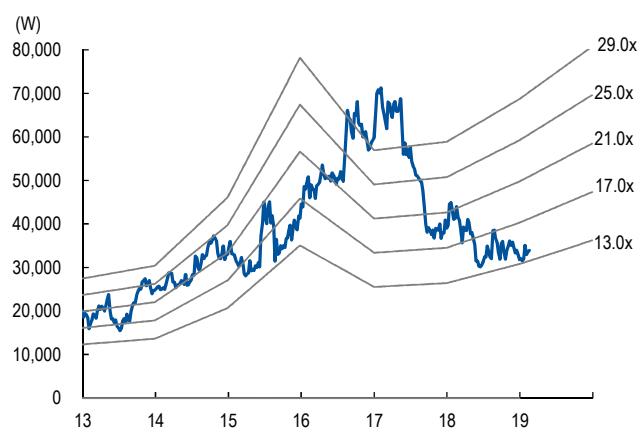
Source: Mirae Asset Daewoo Research

Figure 2. Institutional and foreign net buying vs. share price



Source: Mirae Asset Daewoo Research

Figure 3. P/E band chart

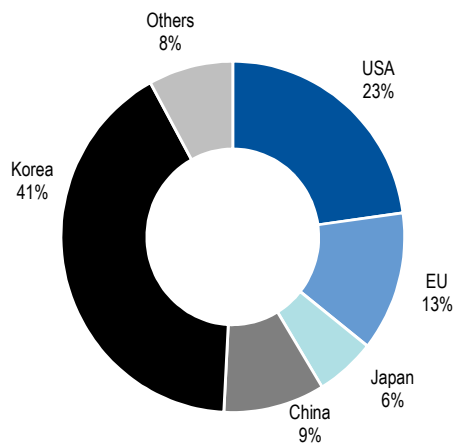


Source: Mirae Asset Daewoo Research

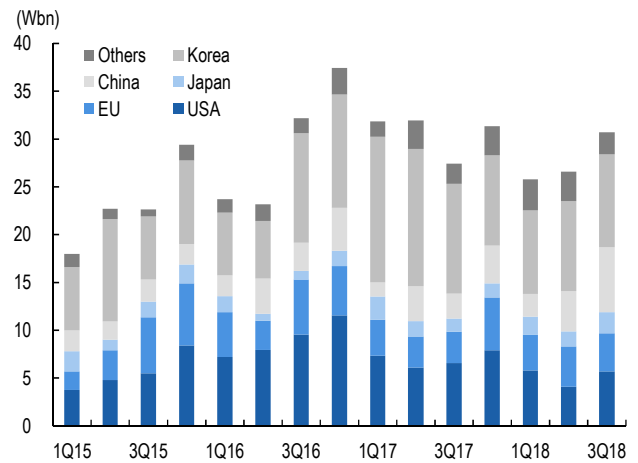
Figure 4. Global peer valuation

Companies	Market cap	OP margin (%)			P/E (x)			PSR (x)			ROE (%)			EV/EBITDA (x)		
		17	18F	19F	17	18F	19F	17	18F	19F	17	18F	19F	17	18F	19F
GE	98,913	-16.7	9.0	10.2	17.5	13.9	12.4	0.7	0.8	0.8	-61.7	13.9	19.3	-	11.6	10.2
Siemens	45,334	14.6	17.7	18.5	27.4	21.3	19.5	2.6	2.5	2.4	20.9	17.9	18.0	16.1	13.6	12.6
Canon	43,460	8.7	8.3	8.4	13.7	14.6	14.5	0.9	1.1	1.1	8.9	8.1	8.1	5.6	7.7	7.7
Philips	41,304	9.5	13.2	14.2	24.9	19.2	16.3	1.8	1.7	1.6	9.1	13.0	14.5	11.0	10.6	9.6
Hitachi	34,592	6.3	8.1	8.5	16.3	11.6	7.9	0.4	0.4	0.4	5.9	8.7	11.7	5.3	4.6	4.2
Terumo	25,926	18.5	18.1	19.4	35.4	31.3	27.1	4.1	4.2	4.0	11.2	13.1	13.4	-	17.2	15.3
Fujifilm Holdings	26,375	5.4	8.2	9.6	18.3	16.0	13.4	0.9	1.1	1.0	5.6	6.2	6.8	6.5	8.4	7.4
Hologic	15,198	-7.4	29.2	29.9	37.8	19.2	17.6	3.9	4.1	3.9	-15.0	23.7	22.5	55.4	15.0	13.8
Teledyne Technologies	9,612	14.4	15.1	15.5	27.9	25.5	24.1	2.9	2.8	2.7	16.0	-	-	15.3	16.2	15.2
Konica Minolta	5,523	5.2	6.0	5.7	11.3	12.8	13.2	0.5	0.5	0.5	8.8	7.6	7.0	4.8	5.6	5.7
Varex Imaging	1,350	5.8	11.6	12.7	31.8	22.7	19.6	1.5	1.6	1.5	4.7	11.8	10.5	14.0	12.9	11.6
Agfa-Gevaert	761	5.7	-	-	-	11.6	10.1	0.3	0.3	0.3	6.0	11.1	10.5	4.1	4.1	3.9
Vieworks	339	17.2	18.4	18.9	16.4	13.9	12.4	2.7	2.3	2.0	14.8	15.6	15.3	10.3	9.1	7.8
Rayence	273	18.2	19.5	20.5	14.4	12.7	11.3	2.3	2.0	1.8	10.5	11.1	11.3	8.1	5.9	5.4
<b>Average</b>		<b>7.5</b>	<b>14.0</b>	<b>14.8</b>	<b>22.5</b>	<b>17.6</b>	<b>15.7</b>	<b>1.8</b>	<b>1.8</b>	<b>1.7</b>	<b>3.2</b>	<b>12.4</b>	<b>13.0</b>	<b>13.0</b>	<b>10.2</b>	<b>9.3</b>

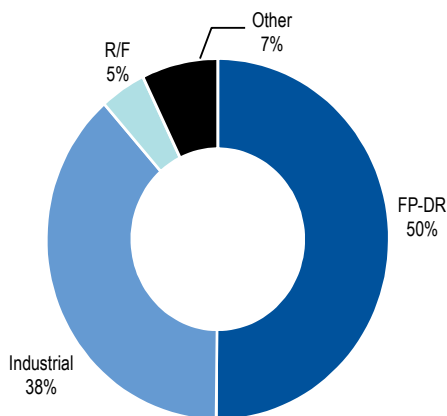
Source: Bloomberg, Mirae Asset Daewoo Research

**Figure 4. Revenue breakdown: Exports vs. domestic**

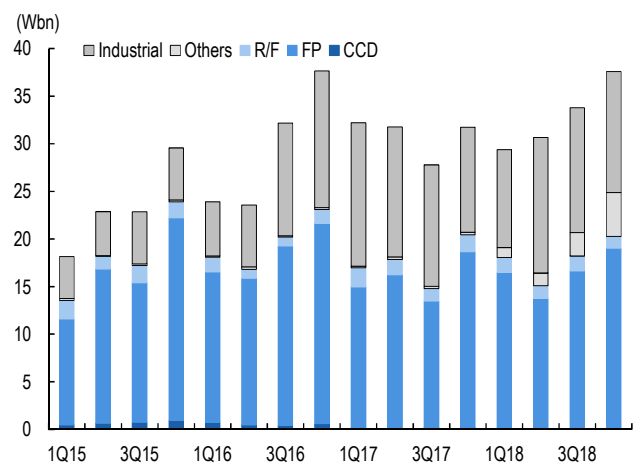
Source: Company data, Mirae Asset Daewoo Research

**Figure 5. Revenue: Exports vs. domestic**

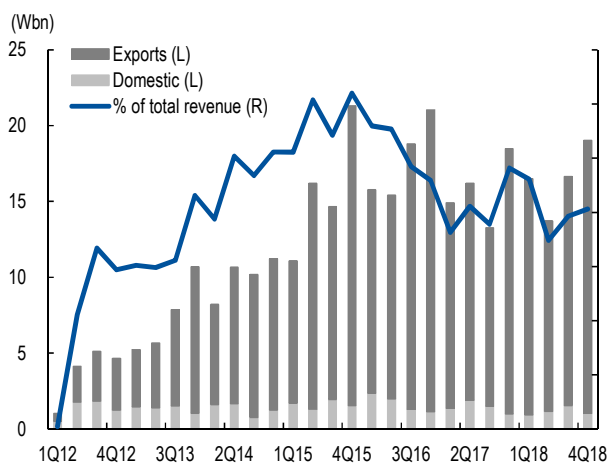
Source: Company data, Mirae Asset Daewoo Research

**Figure 6. Revenue breakdown by product**

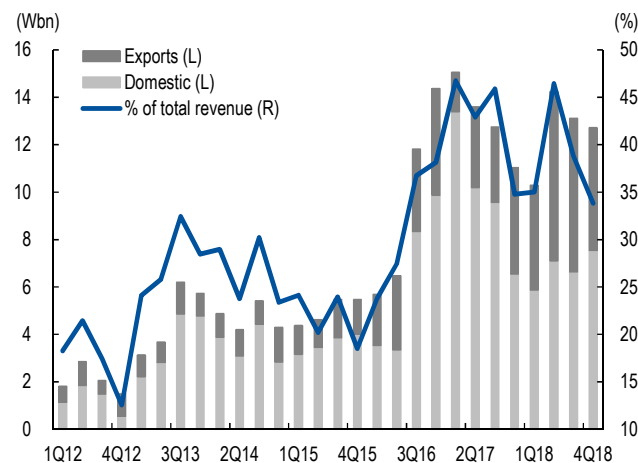
Source: Company data, Mirae Asset Daewoo Research

**Figure 7. Revenue by product**

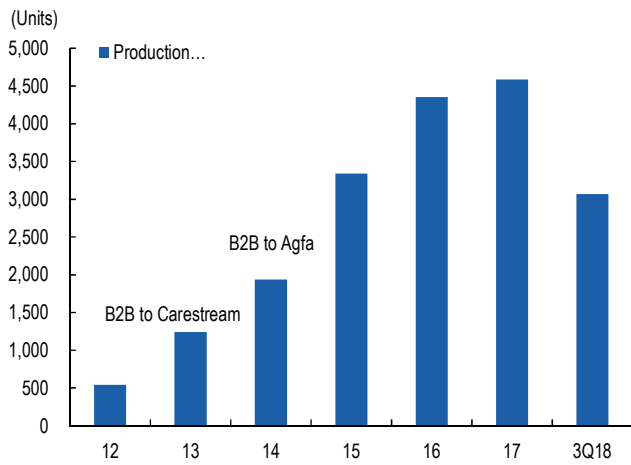
Source: Company data, Mirae Asset Daewoo Research

**Figure 8. Medical detector revenue**

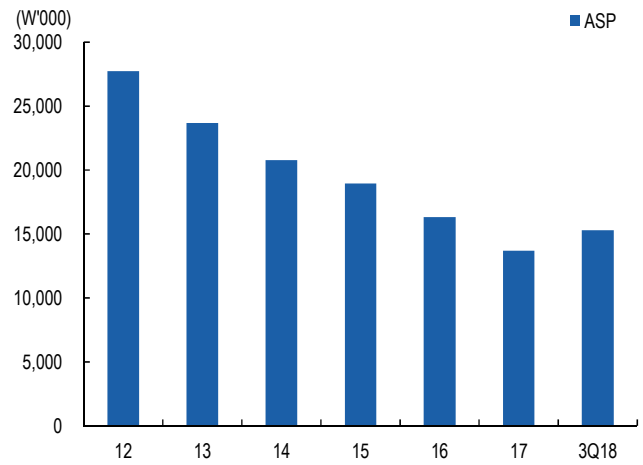
Source: Company data, Mirae Asset Daewoo Research

**Figure 9. Industrial camera revenue**

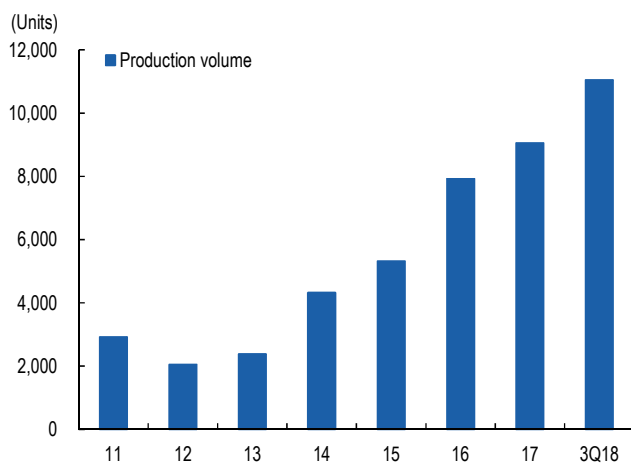
Source: Company data, Mirae Asset Daewoo Research

**Figure 10. FP-DR sales volume**

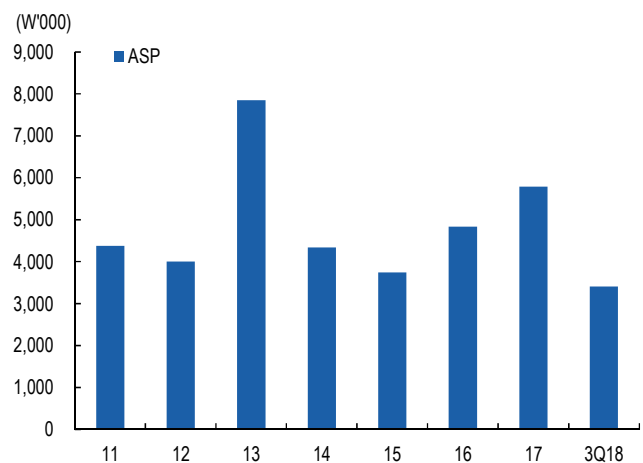
Source: Company data, Mirae Asset Daewoo Research

**Figure 11. FP-DR ASP**

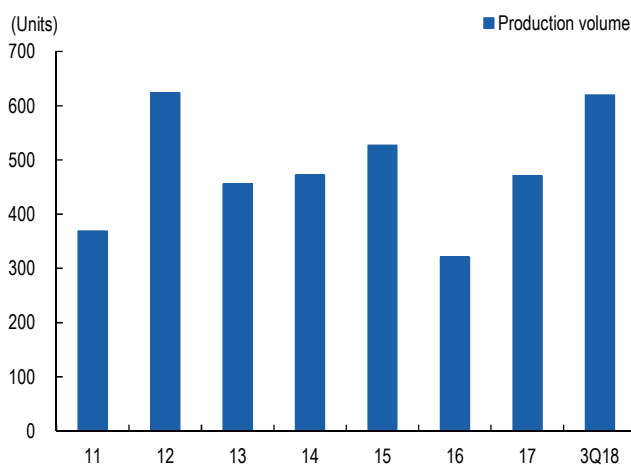
Source: Company data, Mirae Asset Daewoo Research

**Figure 12. Industrial camera production volume**

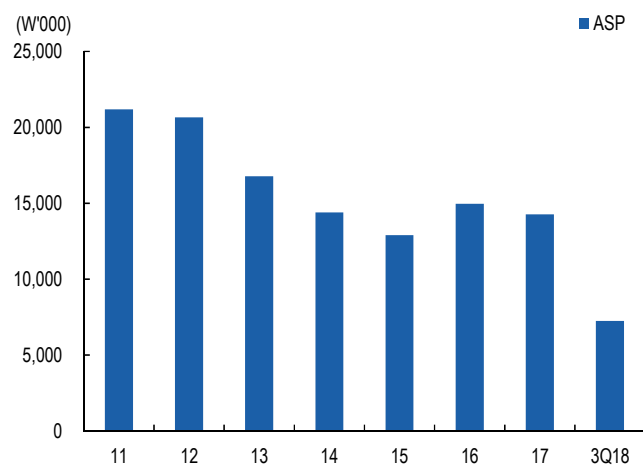
Source: Company data, Mirae Asset Daewoo Research

**Figure 13. Industrial camera ASP**

Source: Company data, Mirae Asset Daewoo Research

**Figure 14. R/F detector production volume**

Source: Company data, Mirae Asset Daewoo Research

**Figure 15. R/F detector ASP**

Source: Company data, Mirae Asset Daewoo Research

**Table 5. Global X-ray system market**

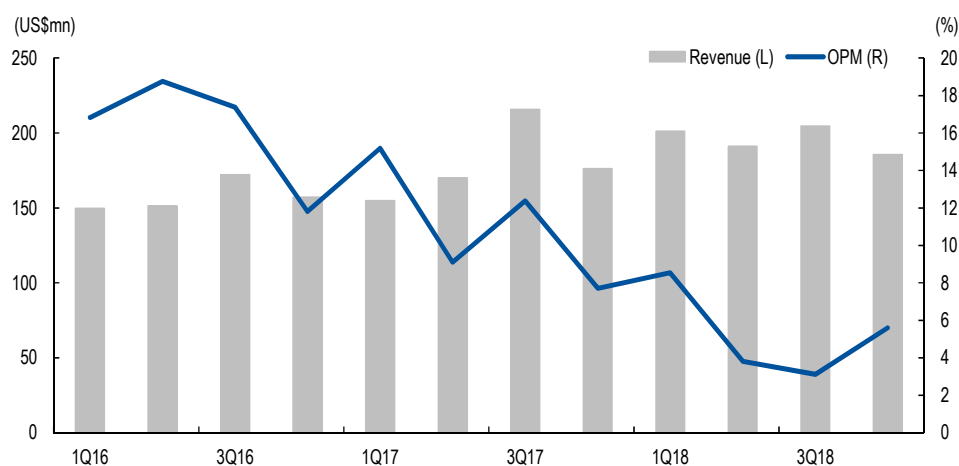
Market	Type	ASP	Producers	Customers
New	FP-DR	W200-300mn	GE, Siemens, Philips, Toshiba, etc.	Large hospitals
Replacement Retrofit	W30-60mn		Agfa, Carestream, Fuji, Konica, Canon, etc.	Small/mid-sized clinics and hospitals

Source: Mirae Asset Daewoo Research

**Table 6. Policy tailwinds for digital X-ray systems: Consolidated Appropriations Act (%)**

Type	Year	Medicare price cut
Analog/film	2017	20
CR	2018	7
	2023	10

Source: Mirae Asset Daewoo Research

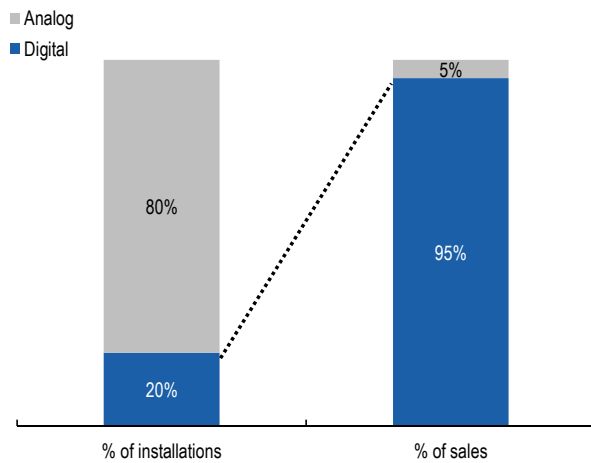
**Figure 16. Varex's revenue and OP margin**

Source: Company data, Mirae Asset Daewoo Research

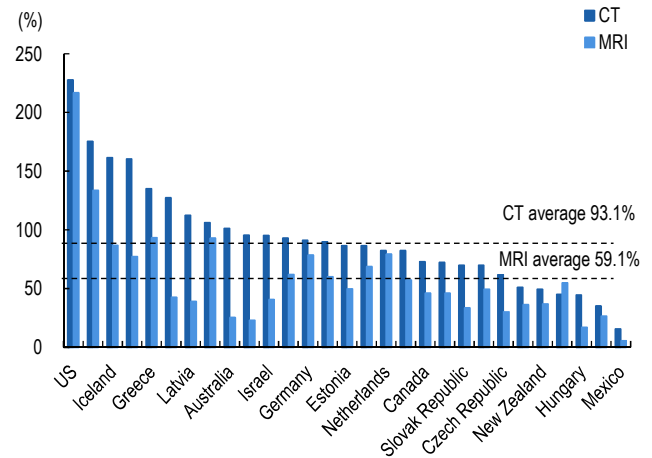
**Table 7. Types of X-ray systems and players**

Type				Characteristics	Domestic competitors	Overseas competitors	ASP
Digital	DR	Indirect conversion	TFT( A-Si)	Large-sized sensors can be used - Highly durable due to the use of nonconductive substrates - Used for general medical, veterinary, and industrial purposes	- Rayence - Vieworks - DRTECH	- Varian - Trixell	US\$10,000-30,000
			CMOS	- High-speed video images can be acquired - High-resolution sensors can be used - Large-sized design potential is limited due to cost/ingot size issues - Used for dental, breast cancer diagnosis, and industrial purposes	- Rayence	- Varian - DALSA	US\$10,000-10,500
			CCD	Cheaper than other options - Low picture quality; high radiation - Used for medical, veterinary, and industrial purposes	- Vieworks		US\$2,000-10,000
		Direct conversion	TFT(A-Se)	- X-ray energy is converted into electrical signals - Low noise levels; high productivity - Low radiation	- DRTECH	- Hologic	
	CR			- Imaging plate (IP) on which fluorescent materials are applied is used - IP can be used repeatedly after removing X-ray residue		- Carestream - Agfa - Fuji	
Analog				- X-rays that penetrate the human body are detected via a film - Film development and storage areas are needed - Image transmission is impossible			

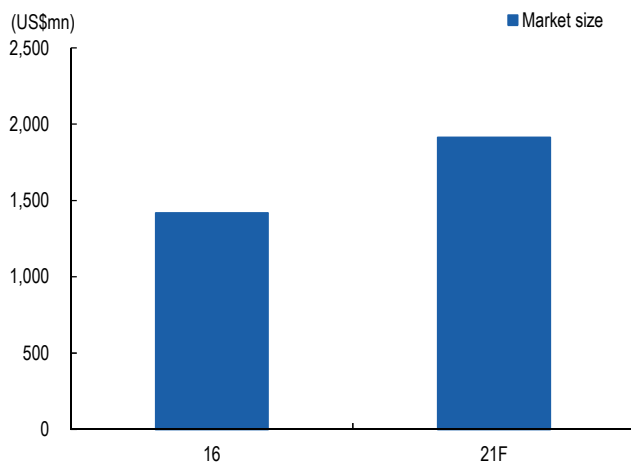
Source: Mirae Asset Daewoo Research

**Figure 17. Global installations/sales breakdown of X-ray systems**

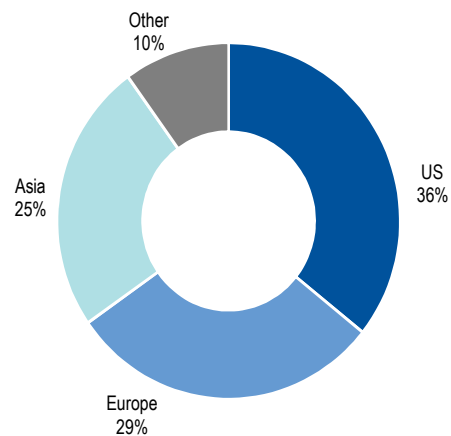
Source: Industry data, Mirae Asset Daewoo Research

**Figure 18. CT and MRI machine penetration rates in OECD countries**

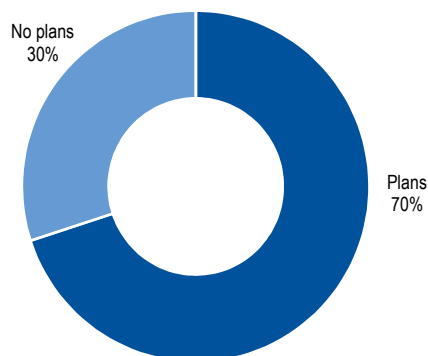
Source: OECD, Mirae Asset Daewoo Research

**Figure 19. Market outlook for FP-DR detectors**

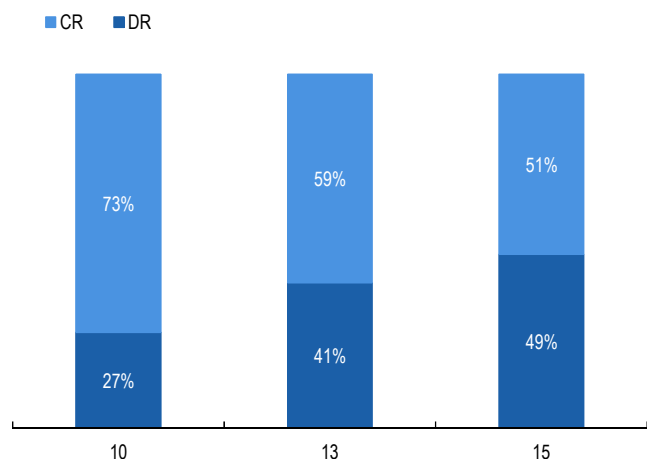
Source: MarketsandMarkets, Mirae Asset Daewoo Research

**Figure 20. FP-DR detector M/S by region**

Source: MarketsandMarkets, Mirae Asset Daewoo Research

**Figure 21. Proportion of US hospitals with plans to convert to digital X-ray systems**

Source: IMV, Mirae Asset Daewoo Research

**Figure 22. US X-ray M/S: Computed radiography (CR) vs. digital radiography (DR)**

Source: IMV, Mirae Asset Daewoo Research



## Vieworks (100120 KQ/Buy/TP: W45,000)

## Comprehensive Income Statement (Summarized)

(Wbn)	12/17	12/18F	12/19F	12/20F
<b>Revenue</b>	<b>123</b>	<b>131</b>	<b>146</b>	<b>161</b>
<b>Cost of Sales</b>	<b>61</b>	<b>65</b>	<b>71</b>	<b>79</b>
<b>Gross Profit</b>	<b>62</b>	<b>66</b>	<b>75</b>	<b>82</b>
<b>SG&amp;A Expenses</b>	<b>33</b>	<b>44</b>	<b>46</b>	<b>49</b>
<b>Operating Profit (Adj)</b>	<b>29</b>	<b>23</b>	<b>29</b>	<b>34</b>
<b>Operating Profit</b>	<b>29</b>	<b>23</b>	<b>29</b>	<b>34</b>
<b>Non-Operating Profit</b>	<b>-6</b>	<b>2</b>	<b>0</b>	<b>0</b>
Net Financial Income	0	0	0	0
Net Gain from Inv in Associates	0	0	0	0
Pretax Profit	23	25	29	34
Income Tax	4	5	5	6
Profit from Continuing Operations	20	21	24	28
Profit from Discontinued Operations	0	0	0	0
<b>Net Profit</b>	<b>20</b>	<b>21</b>	<b>24</b>	<b>28</b>
Controlling Interests	20	21	24	28
Non-Controlling Interests	0	0	0	0
<b>Total Comprehensive Profit</b>	<b>20</b>	<b>21</b>	<b>24</b>	<b>28</b>
Controlling Interests	20	21	24	28
Non-Controlling Interests	0	0	0	0
EBITDA	32	26	32	36
FCF (Free Cash Flow)	16	9	24	24
EBITDA Margin (%)	26.0	19.8	21.9	22.4
Operating Profit Margin (%)	23.6	17.6	19.9	21.1
Net Profit Margin (%)	16.3	16.0	16.4	17.4

## Statement of Financial Condition (Summarized)

(Wbn)	12/17	12/18F	12/19F	12/20F
<b>Current Assets</b>	<b>99</b>	<b>112</b>	<b>137</b>	<b>166</b>
Cash and Cash Equivalents	37	39	60	81
AR & Other Receivables	22	26	28	31
Inventories	22	26	27	30
Other Current Assets	18	21	22	24
<b>Non-Current Assets</b>	<b>39</b>	<b>46</b>	<b>44</b>	<b>41</b>
Investments in Associates	0	0	0	0
Property, Plant and Equipment	32	37	34	33
Intangible Assets	3	6	5	5
<b>Total Assets</b>	<b>138</b>	<b>158</b>	<b>180</b>	<b>208</b>
<b>Current Liabilities</b>	<b>11</b>	<b>14</b>	<b>14</b>	<b>16</b>
AP & Other Payables	4	4	5	5
Short-Term Financial Liabilities	0	2	2	2
Other Current Liabilities	7	8	7	9
<b>Non-Current Liabilities</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Long-Term Financial Liabilities	0	0	0	0
Other Non-Current Liabilities	1	1	1	1
<b>Total Liabilities</b>	<b>12</b>	<b>15</b>	<b>15</b>	<b>17</b>
<b>Controlling Interests</b>	<b>126</b>	<b>143</b>	<b>165</b>	<b>191</b>
Capital Stock	5	5	5	5
Capital Surplus	10	10	10	10
Retained Earnings	114	132	153	179
<b>Non-Controlling Interests</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Stockholders' Equity</b>	<b>126</b>	<b>143</b>	<b>165</b>	<b>191</b>

## Cash Flows (Summarized)

(Wbn)	12/17	12/18F	12/19F	12/20F
Cash Flows from Op Activities	19	15	24	24
Net Profit	20	21	24	28
Non-Cash Income and Expense	13	8	8	8
Depreciation	2	2	2	2
Amortization	2	1	1	1
Others	9	5	5	5
Chg in Working Capital	-6	-8	-2	-6
Chg in AR & Other Receivables	2	-4	-1	-3
Chg in Inventories	1	-3	-1	-3
Chg in AP & Other Payables	-2	0	0	0
<b>Income Tax Paid</b>	<b>-7</b>	<b>-5</b>	<b>-5</b>	<b>-6</b>
Cash Flows from Inv Activities	-8	-13	-1	-2
Chg in PP&E	-3	-7	0	0
Chg in Intangible Assets	-2	0	0	0
Chg in Financial Assets	-4	-2	-1	-2
<b>Others</b>	<b>1</b>	<b>-4</b>	<b>0</b>	<b>0</b>
Cash Flows from Fin Activities	-5	-2	-2	-2
Chg in Financial Liabilities	-1	1	0	0
Chg in Equity	0	0	0	0
Dividends Paid	-2	-2	-2	-2
<b>Others</b>	<b>-2</b>	<b>-1</b>	<b>0</b>	<b>0</b>
Increase (Decrease) in Cash	3	2	21	20
Beginning Balance	35	37	39	60
<b>Ending Balance</b>	<b>37</b>	<b>39</b>	<b>60</b>	<b>81</b>

Source: Company data, Mirae Asset Daewoo Research estimates

## Forecasts/Valuations (Summarized)

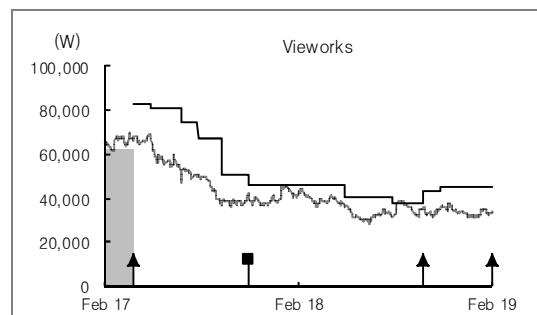
	12/17	12/18F	12/19F	12/20F
P/E (x)	20.8	16.1	14.3	12.2
P/CF (x)	12.6	11.7	10.8	9.4
P/B (x)	3.2	2.2	2.0	1.7
EV/EBITDA (x)	11.2	10.9	8.5	6.8
EPS (W)	1,963	2,054	2,369	2,785
CFPS (W)	3,234	2,830	3,151	3,610
BPS (W)	12,924	14,690	16,862	19,450
DPS (W)	200	200	200	200
Payout ratio (%)	10.1	9.6	8.3	7.1
Dividend Yield (%)	0.5	0.6	0.6	0.6
Revenue Growth (%)	5.1	6.5	11.5	10.3
EBITDA Growth (%)	-5.9	-18.8	23.1	12.5
Operating Profit Growth (%)	-3.3	-20.7	26.1	17.2
EPS Growth (%)	-27.2	4.6	15.3	17.6
Accounts Receivable Turnover (x)	5.3	5.5	5.4	5.5
Inventory Turnover (x)	5.6	5.6	5.6	5.7
Accounts Payable Turnover (x)	18.0	23.4	23.0	23.4
ROA (%)	14.7	13.9	14.0	14.3
ROE (%)	16.6	15.3	15.4	15.7
ROIC (%)	32.7	22.2	25.5	29.4
Liability to Equity Ratio (%)	9.2	10.3	9.4	9.0
Current Ratio (%)	918.0	808.6	947.0	1,040.2
Net Debt to Equity Ratio (%)	-37.2	-34.4	-43.2	-48.9
Interest Coverage Ratio (x)	2,866.9	283.0	230.7	270.6

## APPENDIX 1

### Important Disclosures & Disclaimers

#### 2-Year Rating and Target Price History

Company (Code)	Date	Rating	Target Price
Vieworks (100120)	11/14/2018	Buy	45,000
	10/11/2018	Buy	43,000
	08/14/2018	Trading Buy	37,500
	05/15/2018	Trading Buy	40,600
	11/15/2017	Trading Buy	46,000
	09/27/2017	Buy	51,000
	08/12/2017	Buy	67,000
	07/13/2017	Buy	75,000
	05/16/2017	Buy	81,000
	04/11/2017	Buy	83,000
	03/31/2016	No Coverage	



#### Stock Ratings

Buy	: Relative performance of 20% or greater
Trading Buy	: Relative performance of 10% or greater, but with volatility
Hold	: Relative performance of -10% and 10%
Sell	: Relative performance of -10%

#### Industry Ratings

Overweight	: Fundamentals are favorable or improving
Neutral	: Fundamentals are steady without any material changes
Underweight	: Fundamentals are unfavorable or worsening

Ratings and Target Price History (Share price (—), Target price (—), Not covered (≡), Buy (▲), Trading Buy (■), Hold (●), Sell (◆))

\* Our investment rating is a guide to the relative return of the stock versus the market over the next 12 months.

\* Although it is not part of the official ratings at Mirae Asset Daewoo Co., Ltd., we may call a trading opportunity in case there is a technical or short-term material development.

\* The target price was determined by the research analyst through valuation methods discussed in this report, in part based on the analyst's estimate of future earnings.

\* The achievement of the target price may be impeded by risks related to the subject securities and companies, as well as general market and economic conditions.

#### Equity Ratings Distribution & Investment Banking Services

	Buy	Trading Buy	Hold	Sell
Equity Ratings Distribution	81.28%	9.63%	9.09%	0.00%
Investment Banking Services	84.61%	3.85%	11.54%	0.00%

\* Based on recommendations in the last 12-months (as of December 31, 2018)

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