

17 July 2018

United States

EQUITIES

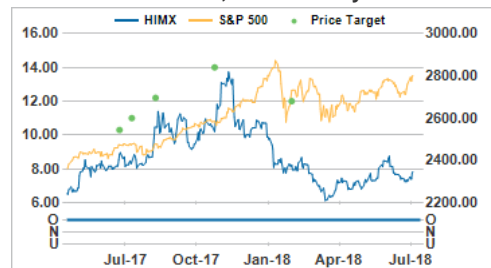
HIMX US Outperform
Price (at 15:21, 16 Jul 2018 GMT) US\$7.82

Valuation	US\$	12.00
- PER		
12-month target	US\$	12.00
12-month TSR	%	+59.0
GICS sector		
Semiconductors & Semiconductor Equipment		
Market cap	US\$m	1,346
30-day avg turnover	US\$m	11.4
Number shares on issue	m	172.1

Investment fundamentals

Year end 31 Dec		2017A	2018E	2019E	2020E
Revenue	m	685.2	919.6	1,129.7	1,412.9
EBIT	m	8.1	89.9	143.1	210.3
Reported profit	m	28.0	84.5	129.8	184.9
Gross cashflow	m	25.8	82.6	127.9	182.9
CFPS	US\$	0.15	0.48	0.74	1.06
CFPS growth	%	-58.7	219.8	54.9	43.1
PGCFPS	x	52.1	16.3	10.5	7.4
EPS rep	US\$	0.16	0.49	0.75	1.07
EPS rep growth	%	-45.1	202.2	53.6	42.4
PER rep	x	48.1	15.9	10.4	7.3
Total DPS	US\$	0.10	0.37	0.57	0.81
Total div yield	%	1.3	4.7	7.2	10.3
ROA	%	3.6	10.1	13.4	17.1
ROE	%	6.1	17.3	23.3	29.2
EV/EBITDA	x	165.9	15.0	9.4	6.4
Net debt/equity	%	2.0	26.0	17.1	20.7
P/BV	x	2.9	2.6	2.3	2.0

HIMX US vs S&P 500, & rec history



Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, July 2018
(all figures in USD unless noted)

Macquarie Governance and Risk Score (MGRS)

On our proprietary [Governance and Risk Score](#) Himax scores in the top quartile of our current universe coverage.

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Himax

NDR; 3D sensing and TDDI ramp-up in 2H18

Key points

- ▶ We're hosting a Himax NDR in HK on July 16~17. Management maintains a consistent and positive tone on 3D sensing, TDDI, and DDIC businesses.
- ▶ Himax targets shipments of structure-light 3D sensing for Android smartphones starting 3Q18, and TDDI will grow significantly in 2H18.
- ▶ We are positive on Himax as a key beneficiary of growing 3D sensing trend, and strong position in DDIC supply chain with TDDI as a new growth driver.

Event

- We're hosting a Himax NDR in HK on July 16~17. FAQs are the 3D sensing outlook (WLO component for a key customer and total solutions for Android smartphones), TDDI shipments/adoption, DDIC market share and competition.

Impact

- **3D sensing SLiM and ASC shipments in 2H18:** Himax targets shipments of structured light 3D sensing (SLiM) starting 3Q18 for high-end Android smartphones. Its active stereoscopic camera (ASC) 3D sensing solution targets shipments by end-2018 as a lower cost solution for mainstream smartphones. The WLO component for a key smartphone customer will grow significantly in 2H18 for new model launches, and Himax is also developing with the customer on new projects such as rear 3D sensing.
- **TDDI ramp-up with new capacity support:** Himax is adding a new 12" foundry on TDDI to ease the supply tightness, and Himax's TDDI shipments will grow significantly in 2H18 with new capacity support. Management expects smartphone TDDI penetration up to 40~45% in 2018 (from 25% in 2017), which we attribute to the growing full-screen smartphone trend. Himax's next generation interlace TDDI will enable bezel-less smartphone design, targeting to gain market share from competitors' non-interlace solutions.
- **DDIC to grow with China panel customers and automotive:** On TV DDIC, Himax has ~50% market share among China panel customers, and management is confident to maintain the market share and grow with customers' new capacity expansion. On automotive DDIC, Himax has >20% global market share and targets to grow the revenue by >30% this year. Management is not worried about competition given its advantages of technology, foundry capacity support, and customer relationships.

Earnings and target price revision

- No change.

Price catalyst

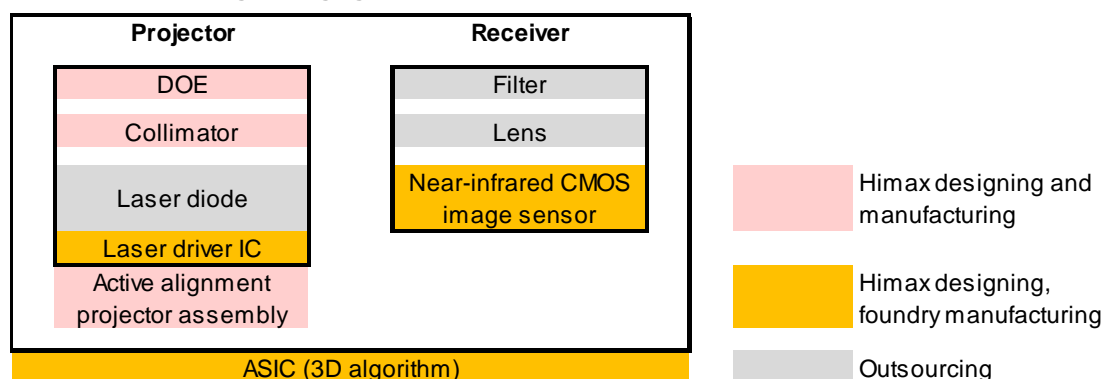
- 12-month price target: US\$12.00 based on 24x 2018E PER.
- Catalyst: 2Q18 results in early Aug, 3D sensing product launches in 2H18.

Action and recommendation

- Maintain Outperform.
- Downside risks to our positive view include weaker market demand, more severe competition, and company execution.

Fig 1 Himax's 3D sensing total solution – SLiM

SLiM (Structured Light Imaging Module)



Source: Company data, Macquarie Research, July 2018

Fig 2 Himax P&L

(US\$ m)	1Q17	2Q17	3Q17	4Q17	1Q18E	2Q18E	3Q18E	4Q18E	2017	2018E	2019E	2020E
Net Sales	155.2	151.7	197.1	181.1	162.9	184.4	242.6	329.8	685.2	919.6	1,129.7	1,412.9
Gross profit	35.9	36.2	50.4	44.6	36.6	43.9	68.5	107.0	167.0	256.1	333.4	445.1
Op income	1.6	(0.9)	3.4	4.1	(3.2)	2.4	23.2	67.5	8.2	89.9	143.1	210.3
Pretax income	0.9	(1.2)	3.8	26.8	(4.0)	2.7	26.0	70.0	30.3	94.7	147.0	210.3
Net income	1.4	(0.6)	3.7	23.5	(2.8)	2.9	23.1	61.4	28.0	84.5	129.8	184.9
EPS (US\$)	0.008	(0.004)	0.021	0.137	(0.016)	0.017	0.134	0.357	0.163	0.491	0.755	1.075
Profitability												
Gross Margin	23.1%	23.8%	25.5%	24.6%	22.5%	23.8%	28.3%	32.5%	24.4%	27.8%	29.5%	31.5%
Operating Margin	1.0%	-0.6%	1.7%	2.3%	-2.0%	1.3%	9.6%	20.5%	1.2%	9.8%	12.7%	14.9%
Pretax Margin	0.6%	-0.8%	1.9%	14.8%	-2.5%	1.5%	10.7%	21.2%	4.4%	10.3%	13.0%	14.9%
Net Margin	0.9%	-0.4%	1.9%	13.0%	-1.7%	1.5%	9.5%	18.6%	4.1%	9.2%	11.5%	13.1%
Sequential growth												
Net Sales	-24%	-2%	30%	-8%	-10%	13%	32%	36%	-15%	34%	23%	25%
Gross profit	-8%	1%	39%	-11%	-18%	20%	56%	56%	-14%	53%	30%	33%
Op income	-77%	nm	nm	21%	nm	nm	865%	190%	-86%	1003%	59%	47%
Pretax income	-87%	nm	nm	615%	nm	nm	856%	170%	-49%	212%	55%	43%
Net income	-69%	nm	nm	539%	nm	nm	710%	166%	-45%	202%	54%	42%

Source: Company data, Macquarie Research, July 2018

Fig 3 Himax balance sheet

(US\$m)	2014	2015	2016	2017	2018E	2019E	2020E
Cash and Cash Equivalents	185	130	184	138	68	118	120
Marketable Security	2	19	10	11	5	9	9
Account Receivables	219	177	191	188	324	307	378
Inventory	166	171	150	135	258	247	303
Total Other Current Assets	156	201	168	190	168	173	196
Total Current Assets	730	698	703	661	823	854	1,006
Net Fixed Assets	57	54	48	87	171	211	251
Other Long Term Assets	7	7	6	12	20	20	20
Long Term Investments and Associates	11	15	15	14	13	13	13
Goodwill	28	28	28	28	28	28	28
Total Long Term Assets	103	105	97	141	232	272	312
Total Assets	833	802	800	802	1,056	1,127	1,318
ST Debt and Current Portion of LT Debt	130	180	138	147	203	219	259
Accounts Payable	179	173	187	190	327	316	379
Other Current Liabilities	46	0	0	0	0	0	0
Total Current Liabilities	355	353	325	337	530	534	639
Long Term Debt	0	0	0	0	0	0	0
Other Long Term Liabilities	6	5	3	6	5	5	5
Total Long Term Liabilities	6	5	3	6	5	5	5
Total Liabilities	361	357	328	343	535	539	643
Share Capital	107	107	107	107	107	107	107
Share Premium	108	105	106	107	105	105	105
Other Reserves	0	-2	-2	-1	0	0	0
Retained Earnings	268	237	266	253	321	387	475
Preferred Stock	0	0	0	0	0	0	0
Minority Equity	-1	6	4	2	-2	-2	-2
Treasury Stock	-10	-9	-9	-9	-9	-9	-9
Total Equity	472	445	472	459	521	587	675

Source: Company data, Macquarie Research, July 2018

Fig 4 Himax cash flow

(US\$m)	2014	2015	2016	2017	2018E	2019E	2020E
Net Income	67	25	51	28	85	130	185
Depreciation and Amortization	15	14	14	17	23	25	25
Others	-2	-16	8	-1	6	-4	0
Net Working Capital	-3	-60	55	-1	-101	13	-87
Net Cash from Operations	76	-37	128	43	12	163	123
Purchase of Property, Plant & Equipment	-11	-10	-8	-40	-94	-40	-40
Acquisitions/Divestiture	0	0	0	0	0	0	0
Purchase/Sale of Other LT assets	2	-2	2	-22	-22	-25	-25
Purchase/Sale of Investments	11	-4	0	1	1	0	0
Net Cash from Investing Activities	2	-15	-6	-61	-115	-65	-65
Issuance/Repayment of Debt	25	50	-42	9	56	15	40
Change in other LT liabilities	2	-1	-2	3	-1	0	0
Issuance/Buyback of shares	0	0	0	0	0	0	0
Payment of Cash Dividends	-46	-51	-22	-41	-17	-63	-97
Other Financing Charges, Net	-1	-1	-2	0	-5	0	0
Net Cash from Financing Activities	-20	-3	-68	-29	33	-48	-57
Net Change in Cash and Cash Equivalents	58	-56	55	-46	-70	50	1
Free Cash Flow	66	-47	120	3	-82	123	83
EBITDA	87	45	73	25	113	168	235

Source: Company data, Macquarie Research, July 2018

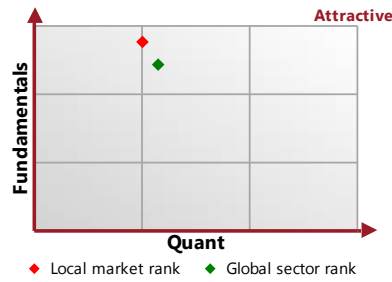
Macquarie Quant View

The quant model currently holds a marginally negative view on Himax Technologies. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Profitability, indicating this stock is not efficiently converting investments to earnings; proxied by ratios like ROE or ROA.

238/385

Global rank in Semiconductors & Semiconductor Equip.

- % of BUY recommendations: 40% (4/10)
- Number of Price Target upgrades: 2
- Number of Price Target upgrades: 0

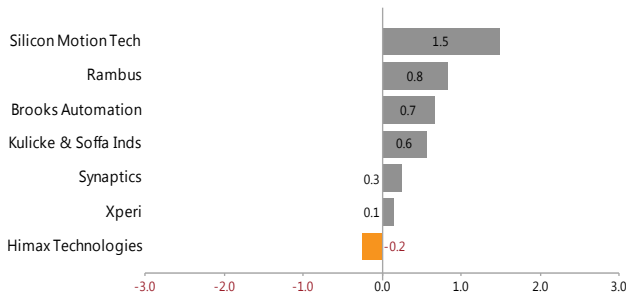


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Taiwan) and Global sector (Semiconductors & Semiconductor Equip.)

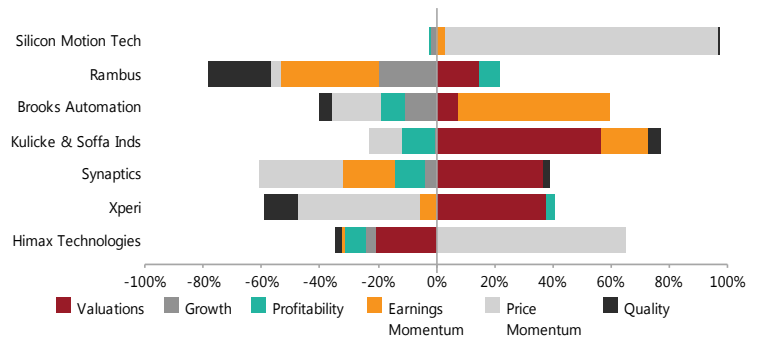
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



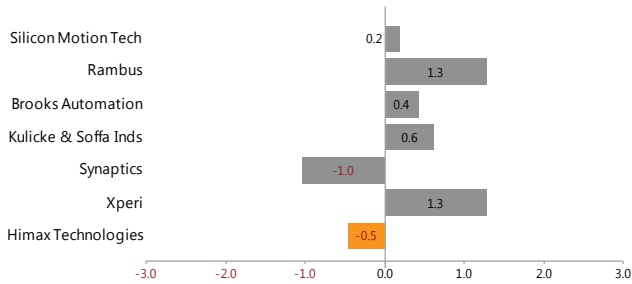
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



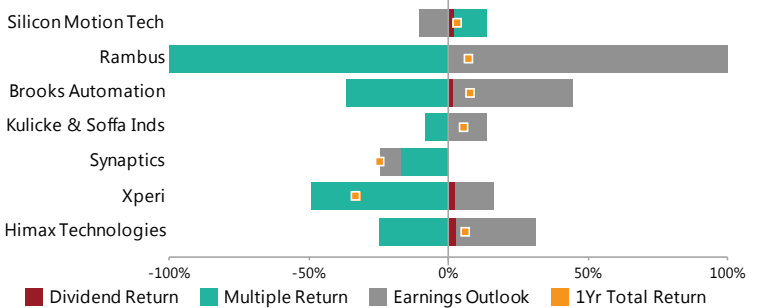
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



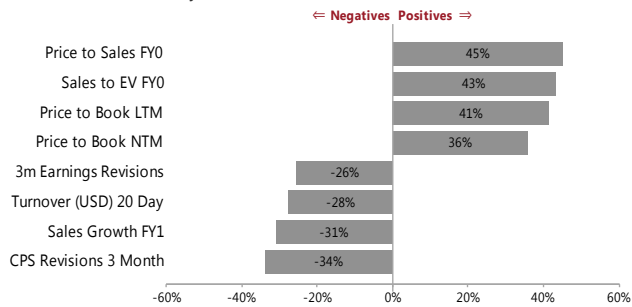
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



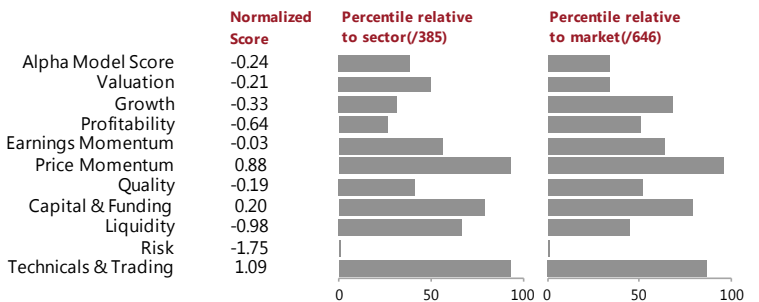
What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.



Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand

Outperform – return >3% in excess of benchmark return
 Neutral – return within 3% of benchmark return
 Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield, which is currently around 9%.

Macquarie – Asia/Europe

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie – South Africa

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie - Canada

Outperform – return >5% in excess of benchmark return
 Neutral – return within 5% of benchmark return
 Underperform – return >5% below benchmark return

Macquarie - USA

Outperform (Buy) – return >5% in excess of Russell 3000 index return
 Neutral (Hold) – return within 5% of Russell 3000 index return
 Underperform (Sell) – return >5% below Russell 3000 index return

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
 * Applicable to Asia/Australian/NZ/Canada stocks only

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense

Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / epowa*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit / average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation

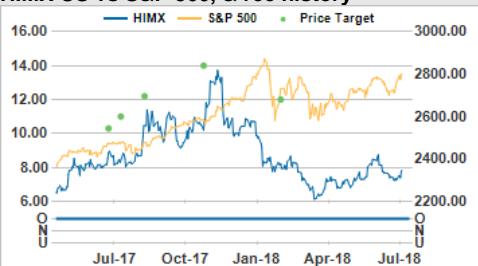
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 June 2018

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	52.87%	61.26%	48.86%	47.54%	69.86%	46.61%	(for global coverage by Macquarie, 3.51% of stocks followed are investment banking clients)
Neutral	34.10%	27.25%	36.36%	46.72%	21.92%	43.22%	(for global coverage by Macquarie, 2.10% of stocks followed are investment banking clients)
Underperform	13.03%	11.49%	14.77%	5.74%	8.22%	10.17%	(for global coverage by Macquarie, 0.00% of stocks followed are investment banking clients)

HIMX US vs S&P 500, & rec history



(all figures in USD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, May 2018

12-month target price methodology

HIMX US: US\$12.00 based on a PER methodology

Company-specific disclosures:

Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/research/disclosures.

Date	Stock Code (BBG code)	Recommendation	Target Price
15-Feb-2018	HIMX US	Outperform	US\$12.00
13-Nov-2017	HIMX US	Outperform	US\$14.00
02-Sep-2017	HIMX US	Outperform	US\$12.20
04-Aug-2017	HIMX US	Outperform	US\$11.00
20-Jul-2017	HIMX US	Outperform	US\$10.30
13-May-2017	HIMX US	Outperform	US\$9.00
17-Apr-2017	HIMX US	Outperform	US\$12.00

Target price risk disclosures:

HIMX US: Any inability to compete successfully in their markets may harm the business. This could be a result of many factors which may include geographic mix and introduction of improved products or service offerings by competitors. The results of operations may be materially affected by global economic conditions generally, including conditions in financial markets. The company is exposed to market risks, such as changes in interest rates, foreign exchange rates and input prices. From time to time, the company will enter into transactions, including transactions in derivative instruments, to manage certain of these exposures.

Analyst certification:

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