

Vitrox Corp (VITRO MK)

Share Price: MYR2.64

Target Price: MYR3.55 (+35%)

MCap (USD): 171M

ADTV (USD): 0.1M

Malaysia

Technology

BUY

(New)

Envisioning greater growth

- A leading customised automated inspection equipment supplier to global semiconductor & EMS players.
- Near-term catalysts: (i) net USD exporter and (ii) rising automation on aggressive semiconductor activities.
- Initiate with BUY and MYR3.55 TP (+35%), pegged to 12.6x CY16 PER, backed by 3+% yield (35% DPR).

Promising industry dynamics

Rising labour costs and the increasing complexity of semiconductor packages are key drivers for more advanced test and inspection automation in search of optimum production yields. Meanwhile, high barriers to entry from extensive domain knowledge requirement, will cap competition and price erosion especially in the advanced inspection equipment segment (i.e 3D AOI and AXI).

The inspection equipment's addressable market is estimated to be ~USD1.4b-1.6b (~9% of total semiconductor equipment sales of USD38b in 2014), distributed among ~10-12 prominent players globally. In order to cater to semiconductor's revenue growth in the next five years, Semiconductor Equipment and Materials International (SEMI) expects a 15% jump in equipment sales (to USD44b), opening windows of opportunities for ViTrox.

Gem in a haystack

ViTrox runs a lean business by employing a flexible manufacturing model and flat organisational structure. This has enabled it to adapt quickly to changing market demands and to maintain a 13-year unbroken streak of profitability since inception.

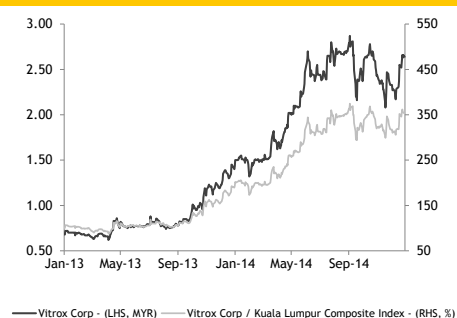
With its strong track record, ViTrox is poised to scale greater heights going forward, given stronger replacement demand and aggressive semiconductor activities. As a net USD exporter, ViTrox is also a beneficiary of the stronger USD/MYR. ViTrox is an under-researched Shariah-compliant growth stock (projected 2-year earnings CAGR of 17%) with strong balance sheet (net cash of MYR47m as at end-Sep 2014). Valuations are attractive at 9x CY16 vs peers' average of 13x CY16. We initiate coverage with a BUY.

FYE Dec (MYR m)	FY12A	FY13A	FY14E	FY15E	FY16E
Revenue	88.9	106.1	174.3	199.7	227.2
EBITDA	23.6	27.2	51.7	62.3	71.9
Core net profit	20.5	24.1	47.6	57.4	65.2
Core EPS (sen)	8.9	10.4	20.6	24.9	28.2
Core EPS growth (%)	(7.8)	17.4	98.0	20.6	13.4
Net DPS (sen)	2.3	5.0	7.2	8.7	9.9
Core P/E (x)	29.8	25.4	12.8	10.6	9.4
P/BV (x)	5.3	4.6	3.8	3.1	2.5
Net dividend yield (%)	0.9	1.9	2.7	3.3	3.7
ROAE (%)	19.4	19.6	32.5	31.8	29.5
ROAA (%)	15.3	15.4	26.4	25.8	23.0
EV/EBITDA (x)	5.1	9.4	11.1	9.2	7.8
Net debt/equity (%)	net cash	net cash	net cash	net cash	net cash

Key Data

Shariah status	Yes
52w high/low (MYR)	2.87/1.32
3m avg turnover (USDm)	0.1
Free float (%)	18.2
Issued shares (m)	233
Market capitalization	MYR614.8M
Major shareholders:	
-CHU JENN WENG	29.2%
-SIAW KOK TONG	20.8%
-YEOH SHIH HOONG	11.1%

Share Price Performance



	1 Mth	3 Mth	12 Mth
Absolute(%)	13.3	5.2	84.6
Relative to index (%)	10.9	6.1	84.6

Maybank vs Market

	Positive	Neutral	Negative
Market Recs	1	0	0
	Maybank Consensus		% +/-
Target Price (MYR)	3.55	3.17	12.1
'14 PATMI (MYRm)	48	42	14.0
'15 PATMI (MYRm)	57	45	26.3

Source: FactSet; Maybank

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Key Investment Thesis

Automation to drive semiconductor production upscale

Testing and inspection is a crucial and inevitable procedure within the semiconductor production process which ensures safety and reliability of semiconductor chips used in various consumer, automotive and healthcare electronic goods. Over the years, semiconductor players have raised their production automation by implementing automated inspection equipment (using cameras, computers and algorithms) to replace human vision in inspection tasks that require precise, high-speed verification on generic and repetitive components. High adoption of automated inspection equipment has resulted in easier and cheaper implementation and has drastically improved inspection efficiency and accuracy.

According to World Semiconductor Trade Statistics (WSTS), semiconductor revenue is likely to grow 4.8% YoY to USD333b in 2014 with 11M14 revenue reported at USD304b (91% of WSTS 2014 forecast). Going forward, WSTS also expects semiconductor revenue to grow steadily by 3% in 2015/16, driven by higher demand from the automotive and communications industries, especially in the Asia Pacific market. With higher projection of revenue on the back of higher volume and more complex semiconductor packages, spending on equipment is necessary.

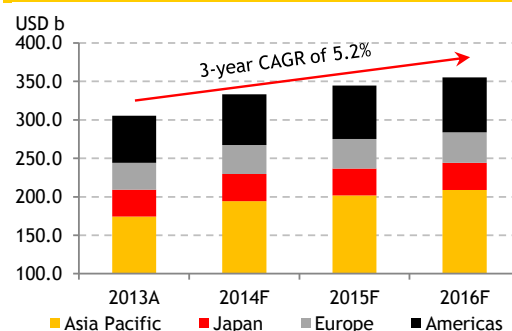
Leader in 3D-AOI and AXI technology in a vast market

Semiconductor Equipment and Materials International (SEMI) estimates that the test and inspection equipment market (USD3.4b) made up ~9% of total semiconductor equipment sales of USD38b in 2014, of which ~41-47% (USD1.4b-1.6b) was spent on inspection equipment, distributed among ~10-12 prominent players globally. As such, we estimate that ViTrox merely captured ~3% of total inspection equipment market share in 2014 and we see abundant opportunity for ViTrox to grow, especially in the premium ABI (Automated Board Inspection) equipment market, specifically 3D-AOI (Advanced Optical Inspection) and AXI (Advanced X-ray Inspection) segments, where ViTrox's expertise lies. Aspired to maintain its position as a market leader in the ABI segment, ViTrox management has committed to allocate 12% of annual revenue to R&D. ViTrox has also consistently upheld its target of introducing three new innovative products (one for each division) every six months to stay ahead of their peers and to minimise price erosion from competition. ViTrox also holds >20 patents across various proprietary technologies it has developed.

Commendable profitability record in a volatile industry

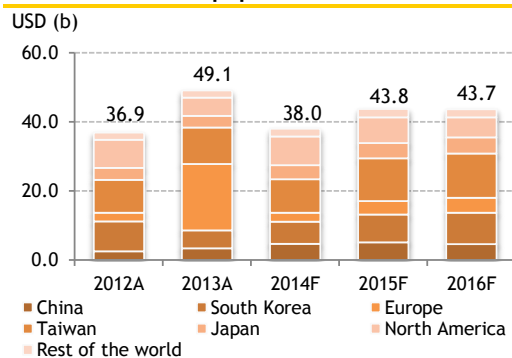
Since the commencement of operations in 2000, ViTrox has boasted a 13-year unbroken record of annual profitability amid a volatile industry and global financial crisis and is poised to record its all-time high net profit in FY14 with 9MFY14 earnings of MYR35.4m (+90% YoY) already surpassing previous record earnings (MYR24.1m in FY13) by 47%. Since listing in 2005, ViTrox has only recorded two quarters of losses, both minor, (1Q09 due to cut in semiconductor capex during the Global Financial Crisis and 1Q12 due to revenue recognition timing from a big order) out of 39 quarters of results. On a quarterly basis, ViTrox's earnings are lumpy in nature due to cyclical from the volatility in semiconductor activities.

Global: Semiconductor revenue forecasts



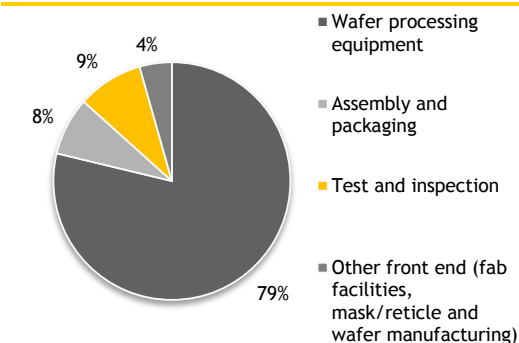
Sources: WSTS, Maybank KE

Semiconductor equipment sales forecasts



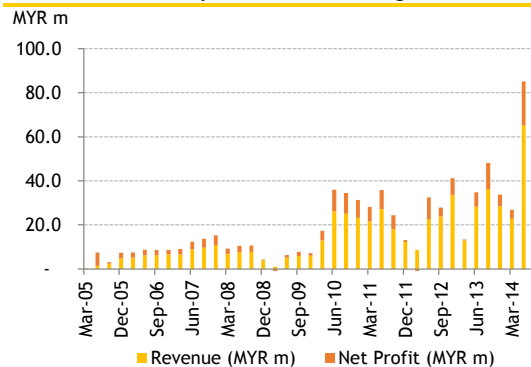
Sources: SEMI, Maybank KE

2014F semicon equipment sales breakdown



Sources: SEMI, Maybank KE

ViTrox: Quarterly revenue/earnings record



Sources: Bursa, Company, Maybank KE

Extra boost from the replacement cycle

Following Agilent Technologies' (A US; Not-rated) exit from the ABI business in early 2009, ViTrox was able to secure a software development support (SDS) agreement from Agilent which granted ViTrox access to Agilent's global sales and support channel to service Agilent equipment sold previously until end of support life in 2017. In exchange for some royalty payment, ViTrox was also able to obtain IP rights to Agilent's ABI products.

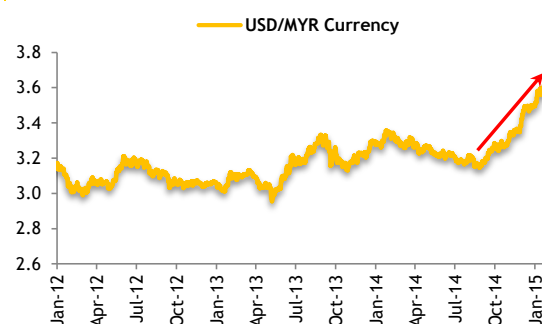
With most of these old Agilent equipment reaching the tail-end of their replacement cycle since 2014, management expects acceleration in terms of sales in 2015 to Agilent's previous clients, estimated to be ~USD80m.

A beneficiary of the strong USD

ViTrox is exposed mainly to fluctuations in the USD against the MYR as ~80% of its revenue is denoted in USD. While raw material purchases which account for ~30% of COGS act as a natural hedge, the remaining portions (ie. labour and utilities) are denoted in local currency. As a result, a weaker MYR/USD exchange would be favourable to ViTrox. MYR/USD strengthened 10% in YTD vs an average of MYR3.27/USD1 in 2014 and our in-house FX research forecasts an average of MYR3.61/USD1 for 2015.

Our sensitivity analysis suggests a potential net profit expansion of 26% in 2015 on a full-year basis should the MYR/USD stay strong at MYR3.61/USD1, 11% above ViTrox's estimated effective rate of MYR3.25/USD1 in 2014. Our forecasts assume MYR3.50/USD1.

USD-MYR daily movement



Source: Bloomberg, Maybank KE

Lean business model

ViTrox employs a flexible manufacturing model, focusing on high-value added activities (i.e. sales & marketing, research & development, prototyping & final assembly, testing & quality control) and outsourcing most of the less complex and high-labour content task to carefully selected sub-contractors. Coupled with a flat organisation structure, this allows ViTrox to have a lean and cost efficient business model which is able to adapt quickly to changing demand in the market. As a result, ViTrox has been able to remain profitable since the inception of its operations, throughout the volatile business cycle and financial crisis.

Strong balance sheet to fund future expansion

ViTrox's existing facility (ViTrox Innovation Centre at Bayan Lepas Industrial Park) is currently 80% utilised and is expected to run out of space by 2017, based on foreseeable business growth. As a result, with its solid net cash war chest of MYR53.3m as at end-Nov 2014, ViTrox announced an acquisition of a 22.2-acre land in Batu Kawan Industrial Park, Penang, for total consideration of MYR34.2m for the purpose of expansion. Its next three-phase expansion plan (scheduled to be fully completed by 2023) aims to lift ViTrox to becoming a global technology leader in the machine vision and embedded solutions space.

Company background

ViTrox - Innovator of automated vision inspection systems

ViTrox designs, develops and manufactures cutting-edge and cost effective automated vision inspection equipment and system-on-chip (SoC) embedded electronics devices for worldwide semiconductor OSAT (outsourced, assembly and test) companies, EMS (electronics manufacturing services) companies, printed circuit board manufacturers, OEM (original equipment manufacturers) and ODM (original design manufacturers). ViTrox's core products today are its Machine Vision System (MVS), Automated Board Inspection (ABI) and Electronics Communication System (ECS).

Maintaining a competitive advantage in this business requires extensive knowledge of multi-disciplinary technology (i.e. lighting, optics/imaging, sensors/cameras, electronics and mechanical handling and software systems). As such, barriers to entry are high due the extensive technical knowledge requirement, heavy R&D investment and the need for a good track record.

ViTrox commenced its operations in 2000 with the establishment of ViTrox Technologies Sdn Bhd, which is principally involved in the development and installation of basic machine vision application (i.e. 2D and 3D measurements inspection solutions as a standalone module).

Inflection point - Emergence of the ABI division

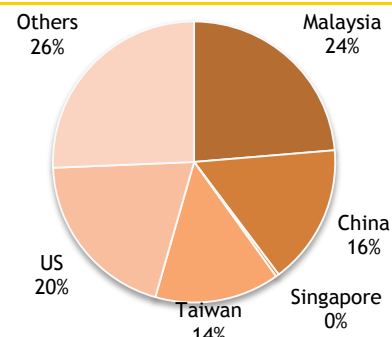
ViTrox's business only took flight after it entered into an agreement with Agilent Technologies (A US; Not-rated) to be one of the latter's two worldwide outsourced service agents (the other being privately-held Automated Inspection Solutions LLC). This provided Vitrox with access to Agilent customers for the ABI products (i.e. Agilent Medalist SJ5000 and SP50 AOI and Agilent Medalist x6000 AXI) until 2017. ViTrox's appointment also coincided in Agilent's decision to exit the ABI business globally citing reorganisation of business strategy to focus on core competency in electronic testing.

As a result, ViTrox was also able to obtain IP rights to their AOI and AXI products in exchange for some royalty payment. Within 1+ years of intensive R&D, ViTrox successfully developed and built the first AXI system, codenamed V810, in Malaysia, which boasted the highest throughput among peers, superior test coverage and excellent call rates, without sacrificing accuracy.

The introduction of new products in the ABI division drove ViTrox's ABI revenue up by 9.6x in 2010, bringing group revenue to MYR87.6m (+3.8x YoY). The V810 also won the Best Product Award in 2011 from the Global Technology Awards. Since then, ViTrox's ABI revenue has never failed to register growth even up to the latest 3Q results as at end-Sep 2014.

In 2013, the ABI division accounted for 64% of revenue and we expect to see further growth in 2014/15 from replacement and upgrade demand by Agilent's previous customers as their old equipment reach the tail-end of the 10-year replacement cycle. This potential replacement and upgrade sales is estimated to be ~USD80m.

ViTrox: FY13 geographical revenue breakdown



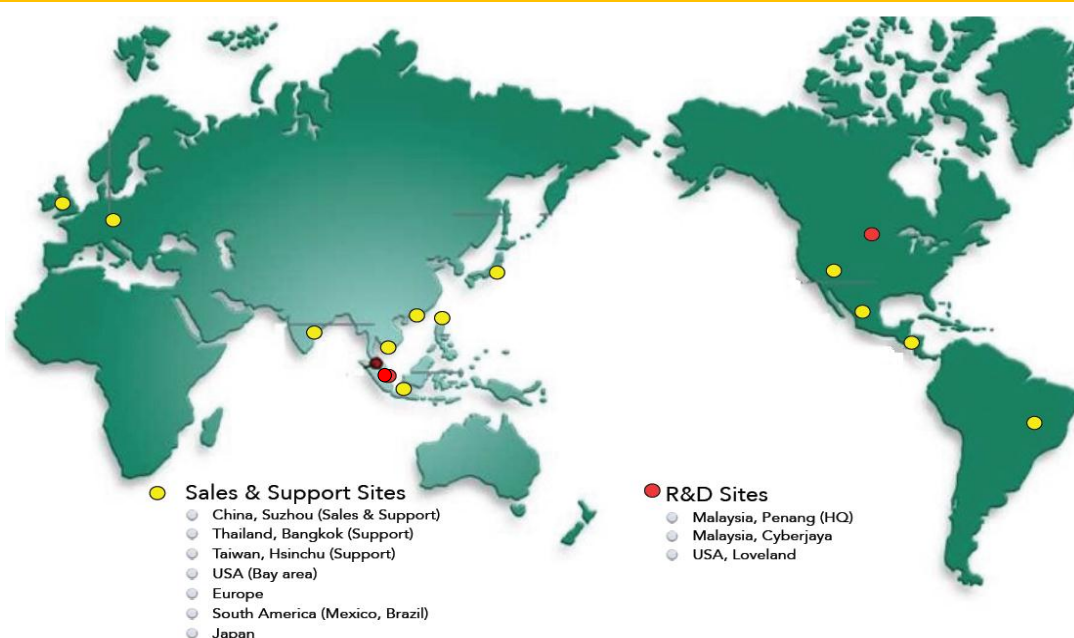
Sources: Company, Maybank KE

With the miniaturisation of electronic components and the greater need for reliability and high-speed inspection, semiconductor companies are becoming more dependent on automated inspection, moving away from manual vision inspection, thus driving demand for automated inspection systems.

From strength to strength

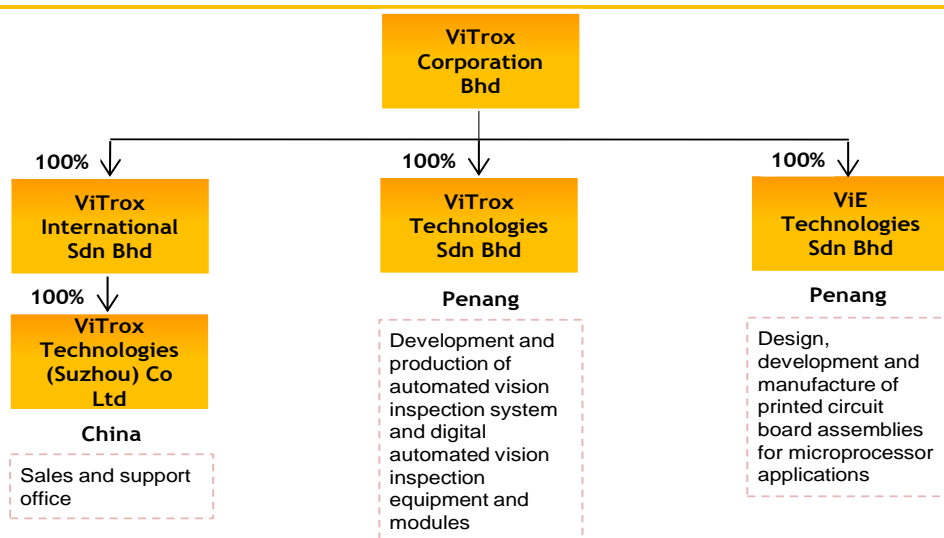
ViTrox listed on the MESDAQ Market of Bursa Malaysia in Sep 2005. Since its listing in 2005, ViTrox's market capitalization has increased 10-fold and in Nov 2009, ViTrox transferred its listing status to the Main Market of Bursa Malaysia Securities. Today, having installed more than 10k systems across 13 countries, the group also operates three R&D sites in Malaysia and the United States, with total staff strength of about 330. ViTrox is also present in China, Thailand, Taiwan, Europe, Mexico, Brazil and Japan through the presence of sales and support sites.

ViTrox: Sales and R&D sites



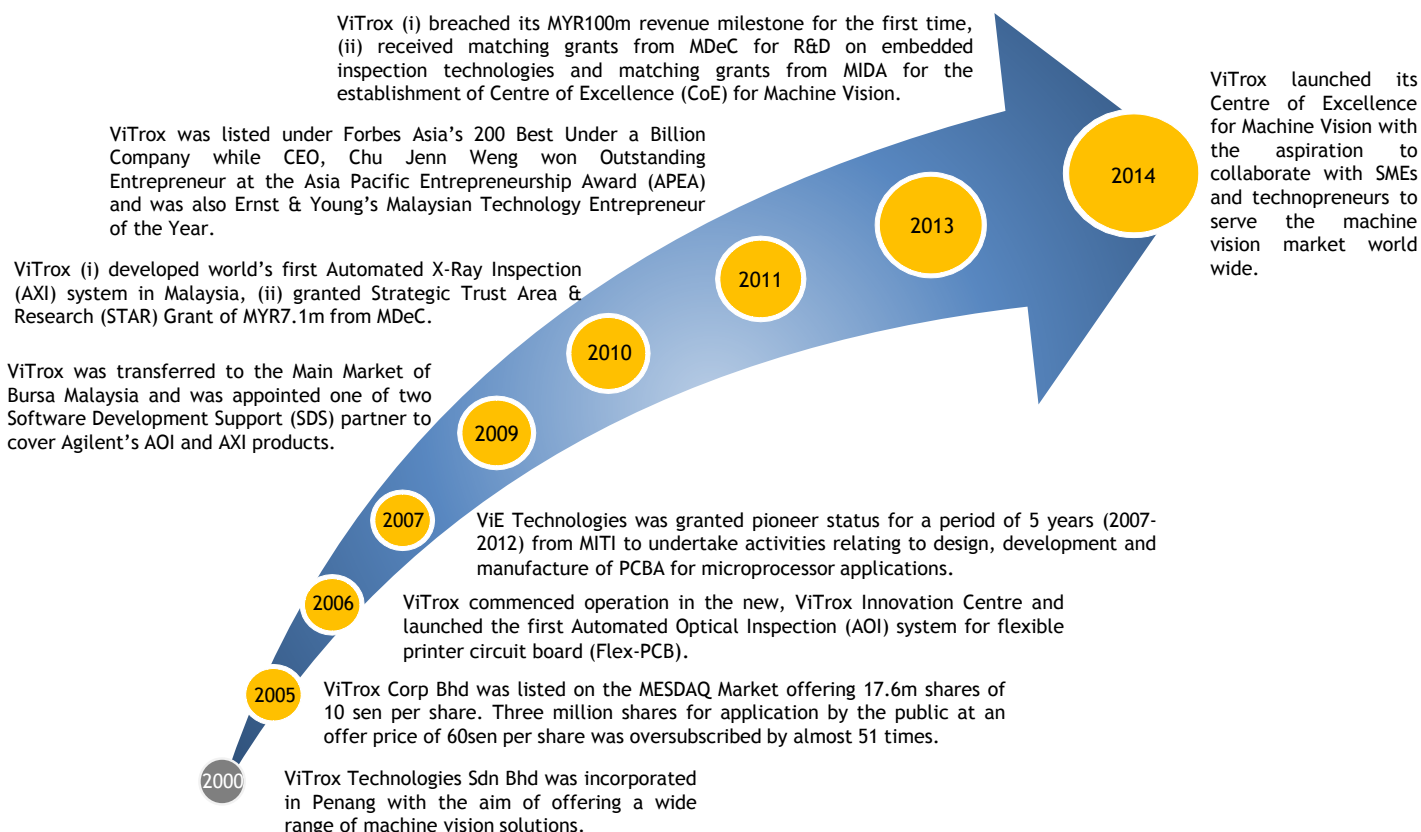
Sources: Company

ViTrox: Corporate structure



Sources: Company, Maybank KE

ViTrox: Corporate milestones



Sources: Company, Maybank KE

The management team

ViTrox was founded in 2000 by Mr Chu Jenn Weng and Mr Siaw Kok Tong, and is helmed by Mr Chu himself, who is the group's Managing Director. He has over 18 years of experience in machine vision and related fields, including five years at Hewlett-Packard Malaysia (now known as Agilent Technologies Sdn Bhd), where he initiated and led the in-house machine vision team. In 2011, Mr Chu was awarded the Ernst & Young Malaysian Technology Entrepreneur of the year and the Outstanding Entrepreneur Award 2011 from the Asia Pacific Entrepreneur Award.

Mr Siaw, also from Hewlett-Packard Malaysia prior to ViTrox, plays a key role in the establishment of the group's customer base in all the countries where ViTrox has presence today.

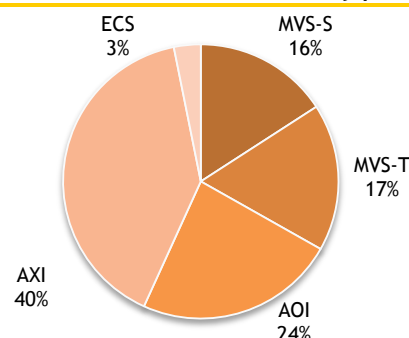
They are backed by a team of key experienced management, which has a proven execution track record in the machine vision industry.

Products & services

ViTrox's core products are divided into three categories: (i) machine vision system (MVS), (ii) automated board inspection (ABI) and (iii) electronics communication systems (ECS). Providing the 'power of sight' to industrial systems to ensure product quality and yields improvement, ViTrox's automated inspection systems have been widely used in the production of automotive, consumer, healthcare and telecommunications electronics among others.

Today, ViTrox serves more than 150 clients globally (vs ~80 clients in 2008) with the biggest client accounting for about 10% of FY14's revenue. Management expects a wider customer base from its aggressive marketing campaign in 2014. As such, no one customer would account for >10% of revenue from 2015 onwards. Some of ViTrox's key customers are strong EMS companies such as Flextronics, Jabil and Celestica.

ViTrox: FY13 revenue breakdown by product



Sources: Company, Maybank KE

ViTrox: Key products

Products	Description
Machine Vision System (MVS)	Provides inspection solutions to detect semiconductor and optoelectronic components' dimensional and visual defects automatically with the aid of 2D and 3D vision modules.
Automated Board Inspection (ABI)	The ABI division is made up of the AOI and AXI systems which focus on the inspection of printed circuit boards (PCBs), flexible PCBs (FPCBs) and bare boards. The AOI system provides inspections of solder joints defect, low contrast component location and wrong and missing components. The AXI system performs similar inspections but has the advantage of inspecting complicated boards or components that are under RF shields, most present in mobile phones and wireless communication products.
Electronics communication systems (ECS)	Offers a wide range of ECS products for machine automation mainly used in data communications and motion control including high-speed digital input and output PC interface card, high-speed low cost remote input and output controller PC interface card and remote modules among others.

Source: Company

ViTrox: One-stop inspection solution provider from components to board level



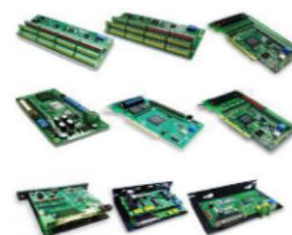
MVS Division provides **reliable, high speed** and **cost effective inspection** solutions to detect semiconductor and optoelectronic components' **dimensional and visual defects** automatically.



ABI Division provides **superior Advanced X-ray Inspection (AXI)** and **Advanced Optical Inspection (AOI)** solutions for SMT and PCBA lines and the V2000 AOI for flex and PCB bare boards.

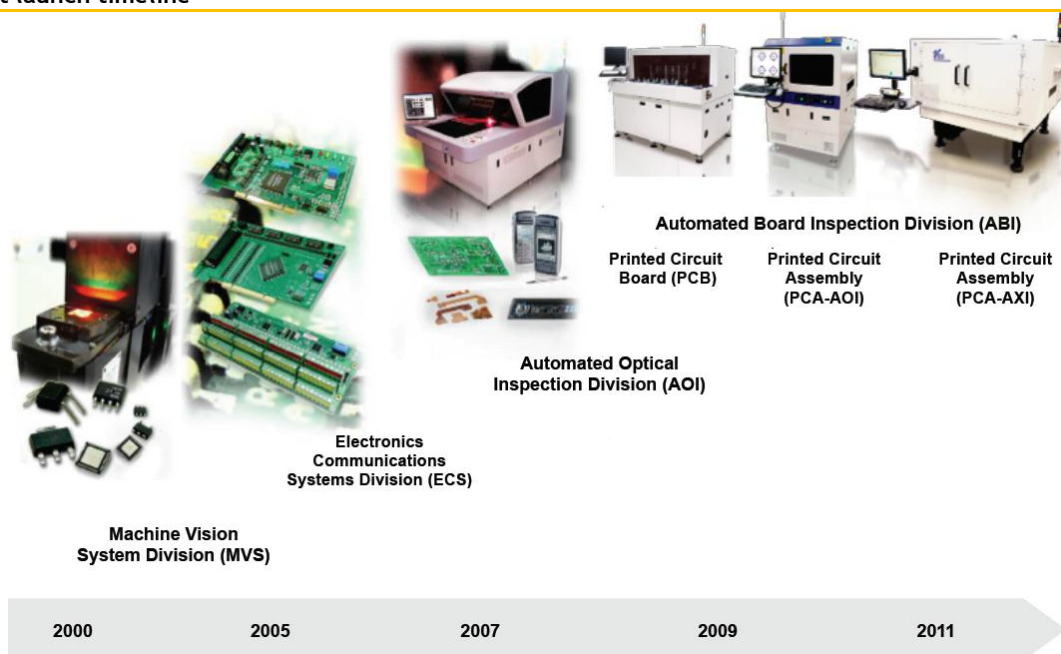


ECS Division provides **high speed, reliable & cost effective I/O** and motion embedded solutions for the automation industries



Sources: Company

ViTrox: Product launch timeline



Sources: Company

ViTrox: Close competitors

Company	Product	Country	Listing Status	Total Workforce
KLA-Tencor	MVS	United States	Listed	6,060
Koh Young Technology	AOI	Korea	Listed	465
Test Research Inc (TRI)	AOI/AXI	Taiwan	Listed	700
Omron Corp	AOI/AXI	Japan	Listed	4,325
Orbotech	AOI	Israel	Listed	1,700
Camtek	AOI	Israel	Listed	513
Jutze Intelligence	AOI	China	Non-listed	NA

Source: Company, Maybank KE

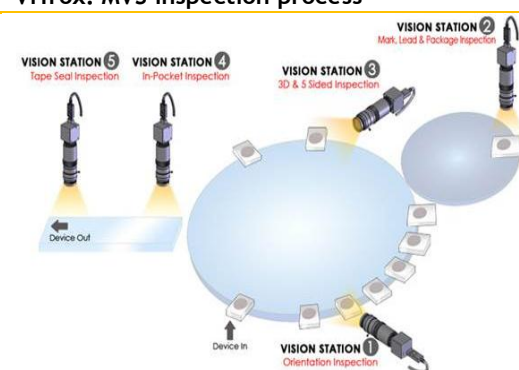
Machine vision system (MVS)

MVS plays a key role in the back-testing of semiconductor components. In general, MVS processes images with the aid of cameras and sensors to automatically inspect and detect dimensional/visual defects as well as surface markings. Images are taken from different angles and orientations, which will then be relayed into a computer for analysis on defects, if any.

MVS systems typically perform 2D mark & orientation inspection, pad and package inspection, 3D lead/ball co-planarity inspection, five-sided pad and package inspection and in-tape mark/lead inspection.

ViTrox's MVS division produces and sells two types of systems; (i) MVS-S (Standard) and (ii) MVS-T (Tray Handler). The MVS division accounted for 33% of group revenue in FY13.

ViTrox: MVS inspection process



Sources: Company, Maybank KE

MVS-Standard (MVS-S)

The MVS-S business provides clients with a module to host the vision inspection system. In 2006, ViTrox's MVS-S division made a breakthrough as they entered into a 10-year contract worth MYR100m with SRM Integration to supply vision inspection systems for SRM's test handlers. MVS-S used to be the largest contributor to ViTrox's revenue but has gradually receded since the emergence of the ABI division. MVS-S accounted for ~16% of FY13 revenue.

MVS-Tray Handler (MVS-T)

The MVS-T division was subsequently established in 2010 after breakthroughs in R&D, complementing the existing MVS-S business. The MVS-T division integrates tray-based vision handlers with MVS-S to perform high-speed high-accuracy true 2D and 3D inspection on multiple IC packages. This development further strengthens ViTrox's position as one of the leading players in the MVS industry. MVS-T contributed 17% to revenue in FY13 and is expected to grow over the next few years on (i) machine qualification by new customers and (ii) increase in ASP with new advanced inspection options and products.

Automated Board Inspection (ABI)

ViTrox's ABI division consists of both the Automated Optical Inspection (AOI) system and Automated X-ray Inspection (AXI) system. The ABI systems enhance a semiconductor player's manufacturing yields and efficiency by detecting defects occurring during the manufacturing process of printed circuit boards (PCB), flexible printed circuit boards (FPC) and high density interconnect (HDI) substrates. The most common defects on PCBs include open circuits, short-circuits, line width variation, trace intrusion and protrusion, pin-hole and via-hole variation.

With ViTrox's latest 3D-AOI (Advanced Optical Inspection) and AXI (Advanced X-ray Inspection), semiconductor players are able to address the concerns of advancing board complexities and need for high-speed and high-accuracy inspection. The ABI division made up 64% of group revenue in FY13.

ViTrox Corporation: AOI & AXI products



V810 XXL In-Line 3D AXI System



V2000 AOI System

Sources: Company, Maybank KE

ViTrox: Award winning products

Product	Awards
V810XXL In-Line 3D Advanced AXI System	New Product Innovation (NPI) Award 2014 Best in Test Award 2014 Global Technology Award 2013 - Best Product
V510 Optimus 3D AOI System	Global Technology Award 2014 - Best Product (Asia)
V810 AXI System	EM Asia Innovation Award 2013 New Product Innovation (NPI) Award 2012 Global Technology Award 2012
V2000 AOI System	Best of Industrial Applications for MSC Malaysia APICTA Awards 2011 - Merit
V810 Advanced 3D AXI System	Global Technology Award 2011
5-sided Pad & Package Vision System	MSC-APICTA Award 2005
3D Lead Vision Inspection System	APICTA Award 2004 - Industrial Applications

Source: Company, Maybank KE

Advanced Optical Inspection (AOI)

ViTrox launched its first AOI product in 2006 which was capable of detecting soldering defects on flexible printed circuit boards (FPCB), securing its position in the AOI market as the first and only FPCB AOI system provider in the region. In 2009, Agilent's exit from the ABI business globally led to the appointment of ViTrox as a software development support (SDS) partner to service its AOI and AXI customers whose equipment, on average, had a remaining of five to seven years of support product life cycle. With most of these old Agilent equipment reaching the tail-end of their replacement cycle since 2014, management expects acceleration in terms of sales in 2015 to Agilent's previous clients, estimated to be ~USD80m.

Management has guided for minimal loss of income from the SDS agreement upon its expiry in 2017.

Advanced X-ray Inspection (AXI)

The AXI range was later introduced with the V810 3D Inspection system in 2010. The AXI uses X-rays instead of optical cameras for the purpose of non-invasive inspection solution. The AXI system performs similar inspections but has the advantage of inspecting through hidden solder joints, component shields and high-density server boards. ViTrox is in direct competition with Test Research Inc (3030 TT, Not Rated) of Taiwan in this space and they have constantly benchmarked their products against each other to maintain their leading positions in terms of technology. The higher complexity of PCBs and FPCBs has led to increasing adoption of AXI equipment and we expect this trend to continue over the long term. For now, this segment remains an oligopoly market which is in the interest of ViTrox.

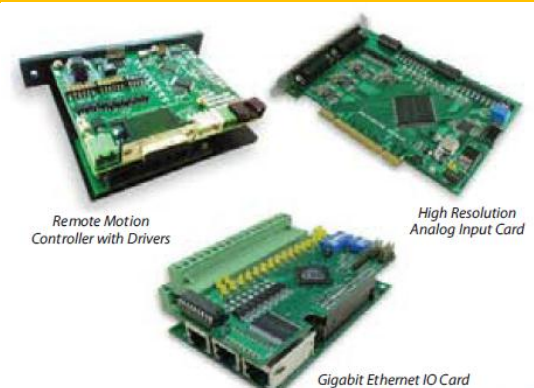
Electronics Communication Systems (ECS)

In 2006, having spent two years of R&D on system-on-chip (SoC) technology, ViTrox embarked on designing, manufacturing and the marketing of cost-effective high-speed intelligent ECS for the equipment designing community. In the same year, ViTrox was able to manufacture and deliver more than 5k units of ECS products.

The ECS division produces a variety of products for machine automation mainly used in data communication and motion control. These products, mainly found in the field of automation of electronics, automotive, telecommunications, pharmaceutical and medical instrument industries, include high speed digital input and output PC interface cards, high speed low cost remote input and output controller PC interface cards and remote modules, high speed high resolution motion controller and driver boards, universal light source controller and digital signal multiplexing card among others.

Due to high compatibility with many overseas products in the market, ViTrox's ECS products have received encouraging acceptance over the years in providing customers with a cost and performance competitive alternative. While contribution towards group revenue has fallen significantly due to the introduction of ABI and stronger demand for MVS, ECS still accounts for 3% of FY13 group revenue.

ViTrox: ECS products



Sources: Company

Earnings outlook

9M14 core net profit surged 90% YoY

ViTrox's 9M14 net profit surged 90% YoY to MYR35.4m due to higher sales contribution from both the MVS and ABI divisions. In 9M14, MVS revenue rose 21% YoY to MYR58m on higher demand for both MVS-S and MVS-T to support higher semiconductor activities especially in the consumer smart devices segment. ABI revenue jumped 139% YoY to MYR65m on higher AXI sales from aggressive marketing campaign especially in the SEA market. Overall, this took 9M14 group revenue to a new high of MYR127m.

Group operating margin also improved 3.8ppts YoY on the back of (i) higher ASP from new product launches and (ii) stronger USD. ViTrox typically records stronger results in 2Q and 3Q, while 1Q and 4Q are usually the weakest due to seasonality factors and the timing of launches of major consumer smart devices.

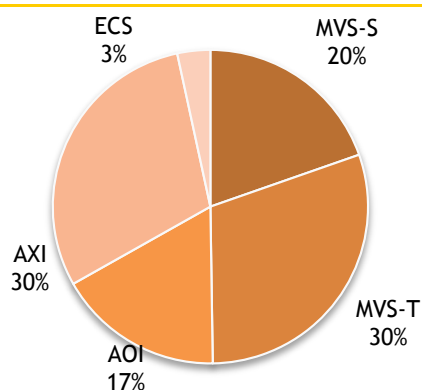
ViTrox: Summary results table

FY Dec (MYR m)	Quarterly					Cumulative		
	3Q14	2Q14	%QoQ	3Q13	%YoY	9M14	9M13	%YoY
Turnover	39.5	65.1	(39.3)	36.3	8.8	127.4	77.6	64.3
EBIT	11.8	20.6	(42.5)	11.8	0.3	36.7	19.4	88.9
Interest expense	(0.2)	0.0	NM	(0.2)	(28.9)	(0.2)	(0.2)	(28.9)
Interest income	0.0	0.0	NM	0.0	NM	0.0	0.0	NM
Pre-tax profit	11.7	20.6	(43.3)	11.6	0.9	36.5	19.2	90.3
Taxation	(0.3)	(0.6)	(52.1)	0.1	NM	(1.1)	(0.6)	86.6
Net profit	11.4	20.0	(43.0)	11.6	(2.1)	35.4	18.6	90.4
Recurring net profit	11.4	20.0	(43.0)	11.6	(2.1)	35.4	18.6	90.4
	3Q14	2Q14	+/- ppt	3Q13	%YoY	9M14	9M13	+/- ppt
EBIT margin (%)	30.0	31.7	(1.7)	32.5	(2.5)	28.8	25.0	3.8
Tax rate (%)	2.5	3.0	(0.5)	(0.5)	3.0	3.1	3.2	(0.1)

Source: Company, Maybank KE

For FY14, we expect MVS-T to overtake ABI as the main revenue contributor, accounting for 50% of group revenue. ABI should contribute 47% while ECS is expected to maintain a 3% share. Group operating margin is also expected to improve 5ppts in FY14 to 28% (9M14: +3.8ppts YoY) driven by (i) economies of scale in production, (ii) stronger USD especially in 4Q14 and (iii) lower R&D expenses.

ViTrox: FY14E revenue breakdown by product

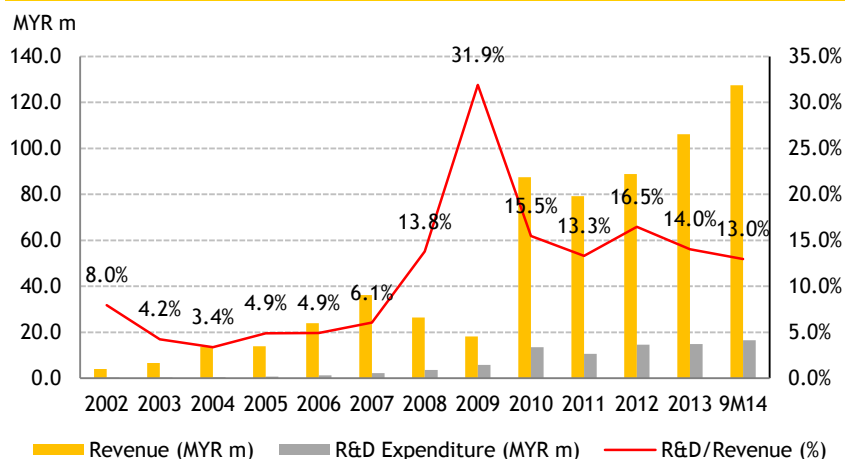


Sources: Maybank KE

A strong commitment to R&D

ViTrox has committed to allocate 12% of annual revenue to R&D (14% in FY13, 13% in 9M14) going forward in order to stay ahead of the competition in terms of technology, minimising ASP erosions with the introduction of new features/products every six months.

ViTrox: Yearly R&D expenditure



Sources: Company

Strong balance sheet to fund future expansion

ViTrox's existing facility (ViTrox Innovation Centre at Bayan Lepas Industrial Park) is currently 80% utilised and is expected to run out of space by 2017, based on foreseeable business growth. As a result, with its solid net cash war chest of MYR47.3m as at end-Sep 2014, ViTrox announced an acquisition of a 22.2-acre land in Batu Kawan Industrial Park, Penang, for total consideration of MYR34.2m for the purpose of expansion. Its next three-phase expansion plan (scheduled to be fully completed by 2023) aims to lift ViTrox to becoming a global technology leader in the machine vision and embedded solutions space.

14% 2-year group revenue CAGR

Over the course of the next two years (FY15-FY16), we expect ViTrox's revenue to expand at a CAGR of 14% led by:

- A 20% 2-year revenue CAGR for ViTrox's ABI division on the back of (i) stronger orders from new launches and replacement demand for AOI, (ii) higher adoption of AXI and (iii) stronger USD. We project ViTrox to sell 130/135 units of AOI (from 96/110 units in FY13/14) and 45/55 units of AXI (from 33/40 units in FY13/14) in FY15/16.
- A 5% 2-year revenue CAGR for ViTrox's MVS-S division on the back of (i) stronger orders from new launches (reel-to-reel & BGA vision inspection handlers) and (ii) stronger USD. We project ViTrox to sell 1,250/1,350 units of MVS-S (from 668/1350 units in FY13/14) in FY15/16.
- A 12% 2-year revenue CAGR in ViTrox's MVS-T division from (i) a bigger customer base from aggressive marketing (from 15 customers in FY13 to 30 customers in FY14), (ii) major upgrades of product range (2000-series) and (iii) stronger USD. We project ViTrox to sell 75/80 units of MVS-T (from 25/70 units in FY13/14) in FY15/16.
- A 9% 2-year revenue CAGR in ViTrox's ECS division from (i) higher sales of ABI and MVS and (ii) stronger USD. We project ViTrox to sell 10.5k/11k units of ECS products (from 5.6k/10k units in FY13/14) in FY15/16.

Formidable 2-year earnings CAGR of 17%

ViTrox is set to scale greater heights as it clinches more orders, having passed the audit process by newly acquired customers in FY14; we project a two-year net profit CAGR of 14%, underpinned by:

- I. An 14% 2-year group revenue CAGR (FY14-16)
- II. Improvement in operating margin from 28% in FY14 to 30% in FY16 on the back of (i) better economies of scale and (ii) positive USD exposure.

Dividend payout ratio (DPR) averaged >35%.

While there is no dividend policy in place, ViTrox has consistently paid out >35% of net profit historically. While higher dividends are possible given ViTrox's strong net cash position, we believe that ViTrox may reserve its cash for (i) expansion of its business and facilities and (ii) potential new investments in the R&D segment to cope with fast-paced technological advancements. We expect ViTrox to maintain its DPR at 35%, translating to net yields of 3+% in FY14-16.

Valuations

Initiate with BUY and MYR3.55 target price

Tagging on a PER of 12.6x (+0.5 SD to long-term mean of 10x) to ViTrox's CY16 EPS of 28sen, we derive a target price of MYR3.55. Our target PER is based on a small cap discount of 10% to global peer valuations of 14x CY16 PER which is also in line with local semiconductor peers Inari Amertron, Globetronics, MPI and Unisem (averaging 12.6x CY16).

Within the basket of collected global competitors against ViTrox, we see most similarity with Koh Young Technology (098460 KS; Not rated) of Korea and Test Research Institute (3030 TT; Not rated) of Taiwan whose expertise are in the 3D AOI segment. Test Research Institute is not rated by consensus.

Consensus forecasts a 51% 2-year earnings CAGR (CY14-16) for Koh Young which derives about one-third of its revenue from the AOI division. This, however, may have been somewhat reflected in Koh Young's premium valuations of 13.6x CY16 PER vs ViTrox's 9.4x CY16 PER.

Currently ViTrox has a customer base of about 150 clients vs >1,000 clients for Koh Young. Nevertheless, we see more potential for ViTrox to expand its customer base globally particularly since it has been aggressively marketing abroad over the past year. We like ViTrox for its (i) competitive technology in ABI and (ii) undemanding valuations. Our MYR3.55 TP offers 35% upside on top of a 3+% net yield in FY15, based on a 35% dividend payout.

Global peer competitors valuation summary

Stock	Country	Product expertise	Mkt Cap	PER (x)	PER (x)	PER (x)	P/B (x)	P/B (x)	ROE (%)	Yield	2-yr CAGR	PEG (x)
			USD m	CY14F	CY15F	CY16F	CY14F	CY15F	CY15F	CY15F	CY14-16	CY15
KLA-Tencor	US	MVS	10,612	20.1	18.3	14.8	4.4	10.3	55.9	9.4	16.6	1.1
Koh Young	Korea	AOI	549	31.3	17.7	13.7	5.2	4.2	23.4	0.8	51.3	0.3
TRI	Taiwan	AOI/AXI	382	9.5	NA	NA	NA	NA	NA	NA	NA	NA
Viscom	Germany	AOI/AXI	129	19.6	18.1	16.8	0.0	0.0	0.1	4.3	8.2	2.2
Omron	Japan	AOI/AXI	9,217	18.7	16.8	16.0	2.4	2.1	12.6	1.6	8.3	2.0
ASTI	Singapore	AOI	27	33.5	16.0	9.4	NA	NA	NA	NA	88.3	0.2
Orbotech	Israel	AOI	648	11.4	7.4	NA	1.3	1.1	15.8	NA	NA	NA
Camtek	Israel	AOI	95	21.6	7.7	NA	NA	NA	NA	NA	NA	NA
Screen	Japan	AOI	1,539	19.3	14.8	13.3	1.8	1.6	11.6	0.9	20.4	0.7
Simple Avg				20.6	14.6	14.0	2.5	3.2				

Source: Bloomberg consensus, Maybank KE

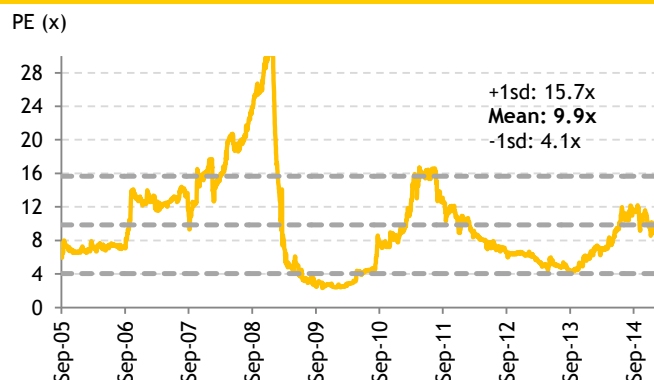
Note: All listed stocks in this table are not under Maybank KE coverage

Local technology/semiconductor sector - Peer valuation summary

Stock	Rec	Shr px	Mkt Cap	TP	PER (x)	PER (x)	PER (x)	P/B (x)	P/B (x)	ROE (%)	Yield	2-yr CAGR	PEG (x)
		MYR	MYR m	MYR	CY14F	CY15F	CY16F	CY14F	CY15F	CY15F	CY15F	CY14-16F	CY15
Inari	Buy	2.90	2,084	3.70	21.8	14.5	12.3	8.8	6.3	32.4	2.4	30.4	0.5
Globetronics	NR	4.68	1,315	NR	20.1	16.5	14.6	4.6	4.3	26.3	5.0	17.4	1.0
MPI	NR	5.76	1,146	NR	17.3	12.1	10.6	1.5	1.4	11.6	3.8	27.7	0.4
Unisem	NR	2.04	1,375	NR	23.6	16.2	12.9	1.3	1.3	8.0	2.5	35.0	0.5
Simple Ave					20.7	14.8	12.6	4.1	3.3				
ViTrox	Buy	2.64	615	3.55	12.8	10.6	9.4	3.8	3.1	26.3	3.3	16.9	0.6

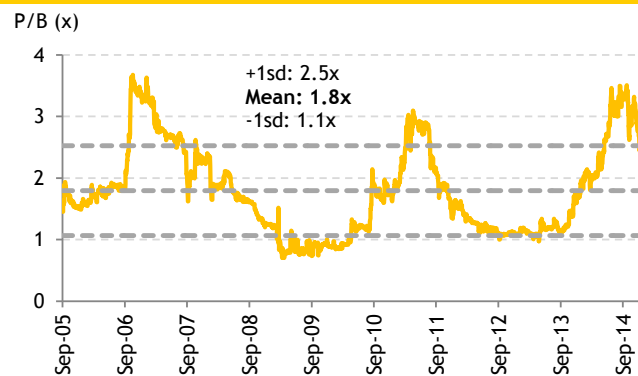
Source: Bloomberg consensus, Maybank KE

ViTrox Corporation: Historical PER band



Source: Bloomberg, Maybank KE

ViTrox Corporation: Historical P/BV band



Source: Bloomberg, Maybank KE

Risk factors

Intellectual property rights

ViTrox competes in the niche industry of MVS and ABI which is susceptible to patent infringement and technology imitation. However, ViTrox's proprietary inspection system solutions require extensive domain knowledge before they can be applied or replicated for commercial exploitation.

ViTrox's employees, customers and suppliers are bound by non-disclosure agreements to limit the possibility of unauthorised copying and exploitation. Internally, ViTrox has also undertaken modularisation of its software codes which is only accessible by certain top management, diminishing the probability of breaches by employees.

In 2012, ViTrox filed five patents and one copyright for their AOI and AXI products.

Cyclical nature of the semiconductor industry

ViTrox Group's performance is closely tied to the performance of the semiconductor industry, especially the related OEM market segment. The semiconductor industry is generally subject to cyclical trends and short product life cycles. An unexpected downturn in the semiconductor industry will start a chain reaction starting with a lack of infrastructure investment by the OEM players which could possibly reduce the demand for MVS and ABI inspection systems from ViTrox leading to fluctuations in earnings.

MSC Status

ViTrox and its subsidiaries currently enjoy the pioneer status/tax exempt incentive for certain qualifying products granted by the Ministry of International Trade and Industry (MITI) and Multimedia Development Corporation Sdn Bhd (MDec). ViTrox was first granted the MSC status in 2005 for a period of five years, which was then extended on Sep 2010. The current pioneer status by MDec and MITI ends on 25 Jan 2015.

ViTrox Technologies Sdn Bhd was also granted pioneer status by MITI for a period five years for development and production of digital automated vision inspection equipment and modules starting 1 Apr 2005. MITI then granted an extension of five years from 1 Apr 2010 to 31 Mar 2015.

Lastly, ViE Technologies was granted pioneer status by MITI for a five-year period to undertake activities relating to design, development and manufacture of embedded high density electronic modules from 1 Jan 2013 to 31 Dec 2017. As a result of these incentives, ViTrox has enjoyed low tax rates averaging 4% over the past three years. The inability to extend these tax incentives will result in higher tax rates going forward for the group.

Management expects its MSC and pioneer status to be extended upon expiry given ViTrox's implementation of new technologies into its products every six months.

Forex risk

ViTrox is exposed mainly to fluctuations in the USD against the MYR as ~80% of its revenue is denoted in USD. While raw material purchases which account for ~30% of COGS act as a natural hedge, the remaining portions (ie. labour and utilities) are denoted in local currency. As a result, a weaker MYR/USD exchange would be favourable to ViTrox.

Our sensitivity analysis suggests that for every 1% change in our base case exchange rate of MYR3.50/USD1, ViTrox's FY14/15/16 net profit will vary by ~2%, respectively.

FYE 31 Dec	FY12A	FY13A	FY14E	FY15E	FY16E
Key Metrics					
P/E (reported) (x)	29.8	25.4	12.8	10.6	9.4
Core P/E (x)	29.8	25.4	12.8	10.6	9.4
P/BV (x)	5.3	4.6	3.8	3.1	2.5
P/NTA (x)	5.3	4.6	3.8	3.1	2.5
Net dividend yield (%)	0.9	1.9	2.7	3.3	3.7
FCF yield (%)	nm	0.3	4.2	3.5	4.8
EV/EBITDA (x)	5.1	9.4	11.1	9.2	7.8
EV/EBIT (x)	5.7	10.5	11.8	9.7	8.4

INCOME STATEMENT (MYR m)

Revenue	88.9	106.1	174.3	199.7	227.2
Gross profit	52.7	65.2	107.2	123.8	140.9
EBITDA	23.6	27.2	51.7	62.3	71.9
Depreciation	(1.8)	(1.9)	(2.2)	(2.4)	(4.0)
Amortisation	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)
EBIT	20.9	24.4	48.5	59.0	67.0
Net interest income /(exp)	0.6	0.4	0.6	0.3	0.2
Associates & JV	0.0	0.0	0.0	0.0	0.0
Exceptionals	0.0	0.0	0.0	0.0	0.0
Other pretax income	0.0	0.0	0.0	0.0	0.0
Pretax profit	21.6	24.8	49.1	59.2	67.2
Income tax	(1.1)	(0.7)	(1.5)	(1.8)	(2.0)
Minorities	0.0	0.0	0.0	0.0	0.0
Perpetual securities	0.0	0.0	0.0	0.0	0.0
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	20.5	24.1	47.6	57.4	65.2
Core net profit	20.5	24.1	47.6	57.4	65.2

BALANCE SHEET (MYR m)

Cash & Short Term Investments	43.9	40.5	40.3	61.9	88.6
Accounts receivable	39.2	51.8	65.1	74.1	83.9
Inventory	28.0	37.0	47.8	54.1	61.5
Property, Plant & Equip (net)	30.1	31.9	34.7	57.3	78.3
Intangible assets	0.0	0.0	0.0	0.0	0.0
Investment in Associates & JVs	0.0	0.0	0.0	0.0	0.0
Other assets	4.5	6.2	5.3	4.3	3.4
Total assets	145.6	167.4	193.1	251.8	315.7
ST interest bearing debt	1.2	1.3	1.3	1.3	1.3
Accounts payable	16.8	17.3	22.0	23.3	24.9
LT interest bearing debt	11.3	10.9	0.9	20.9	40.9
Other liabilities	2.0	7.0	7.0	7.0	7.0
Total Liabilities	31.2	36.2	30.9	52.2	73.8
Shareholders Equity	114.5	131.2	162.2	199.5	241.9
Minority Interest	0.0	0.0	0.0	0.0	0.0
Total shareholder equity	114.5	131.2	162.2	199.5	241.9
Perpetual securities	0.0	0.0	0.0	0.0	0.0
Total liabilities and equity	145.6	167.4	193.1	251.8	315.7

CASH FLOW (MYR m)

Pretax profit	21.6	24.8	49.1	59.2	67.2
Depreciation & amortisation	2.7	2.8	3.2	3.4	4.9
Adj net interest (income)/exp	(0.6)	(0.4)	(0.6)	(0.3)	(0.2)
Change in working capital	(18.0)	(17.9)	(19.3)	(14.0)	(15.7)
Cash taxes paid	(1.2)	(0.8)	(1.5)	(1.8)	(2.0)
Other operating cash flow	(3.2)	(0.6)	0.0	0.0	0.0
Cash flow from operations	1.2	8.0	30.9	46.5	54.2
Capex	(3.9)	(6.1)	(5.0)	(25.0)	(25.0)
Free cash flow	(2.8)	1.9	25.9	21.5	29.2
Dividends paid	(4.6)	(5.2)	(16.7)	(20.1)	(22.8)
Equity raised / (purchased)	0.0	0.0	0.0	0.0	0.0
Perpetual securities	0.0	0.0	0.0	0.0	0.0
Change in Debt	4.3	(1.3)	(10.0)	20.0	20.0
Perpetual securities distribution	0.0	0.0	0.0	0.0	0.0
Other invest/financing cash flow	3.0	1.1	0.6	0.3	0.2
Effect of exch rate changes	(0.6)	0.0	0.0	0.0	0.0
Net cash flow	(0.7)	(3.5)	(0.2)	21.7	26.6

FYE 31 Dec	FY12A	FY13A	FY14E	FY15E	FY16E
Key Ratios					
Growth ratios (%)					
Revenue growth	12.2	19.4	64.2	14.6	13.8
EBITDA growth	(2.6)	15.4	89.8	20.5	15.4
EBIT growth	(6.2)	16.6	99.0	21.5	13.6
Pretax growth	(6.3)	15.1	98.0	20.6	13.4
Reported net profit growth	(7.8)	17.4	98.0	20.6	13.4
Core net profit growth	(7.8)	17.4	98.0	20.6	13.4
Profitability ratios (%)					
EBITDA margin	26.6	25.7	29.7	31.2	31.7
EBIT margin	23.5	23.0	27.8	29.5	29.5
Pretax profit margin	24.3	23.4	28.2	29.6	29.6
Payout ratio	25.4	48.0	35.0	35.0	35.0
DuPont analysis					
Net profit margin (%)	23.1	22.7	27.3	28.8	28.7
Revenue/Assets (x)	0.6	0.6	0.9	0.8	0.7
Assets/Equity (x)	1.3	1.3	1.2	1.3	1.3
ROAE (%)	19.4	19.6	32.5	31.8	29.5
ROAA (%)	15.3	15.4	26.4	25.8	23.0
Liquidity & Efficiency					
Cash conversion cycle	238.9	290.3	242.7	259.4	265.5
Days receivable outstanding	123.2	154.4	120.7	125.4	125.2
Days inventory outstanding	253.5	285.9	227.4	241.6	240.9
Days payables outstanding	137.8	149.9	105.5	107.6	100.6
Dividend cover (x)	3.9	2.1	2.9	2.9	2.9
Current ratio (x)	6.1	6.0	5.8	6.8	8.0
Leverage & Expense Analysis					
Asset/Liability (x)	4.7	4.6	6.2	4.8	4.3
Net debt/equity (%)	net cash	net cash	net cash	net cash	net cash
Net interest cover (x)	na	na	na	na	na
Debt/EBITDA (x)	0.5	0.4	0.0	0.4	0.6
Capex/revenue (%)	4.4	5.7	2.9	12.5	11.0
Net debt/ (net cash)	(31.3)	(28.3)	(38.1)	(39.8)	(46.4)

Source: Company; Maybank

Appendix 1

Board of Directors

Name	Date of Appointment	Designation	Experience
Dato' Seri Kiew Kwong Sen	8 Jul 2005	Chairman Independent Non-Executive Director	<ul style="list-style-type: none"> Formerly Vice Chairman of the Board of Invest Penang Bhd Currently heads the board of Mini-Circuits Technologies Malaysia, Gibraltar Semiconductor, Blue Cell Technologies and Mini-Circuits Taiwan Ltd
Chu Jenn Weng	7 Jul 2005	Managing Director President CEO	<ul style="list-style-type: none"> Previously worked at Hewlett-Packard Malaysia (HPM) where he initiated and led the in-house machine vision team Currently serves as the CEO of ViTrox Group
Siauw Kok Tong	7 Jul 2005	Executive Director Senior Vice President	<ul style="list-style-type: none"> Co-founder of ViTrox Technologies Sdn Bhd Currently overseas the operations for the Machine Vision System (MVS) business unit
Yeoh Shih Hoong	7 July 2005	Executive Director Senior Vice President	<ul style="list-style-type: none"> Played a pivotal role in the development of many products for the company such as the Mark Lead Inspection System, IC Package Inspection System, Object Verification System and Die Counting System and the 4-in-1 Integration solution Currently involved in R&D of new machine vision products
Chuah Poay Ngee	15 Nov 2006	Independent Non-executive Director	<ul style="list-style-type: none"> A Chartered Accountant of the Malaysian Institute of Accountants and a Certified Practicing Accountant of the Australian Society of Certified Practicing Accountants Currently attached to Dynacraft Industries (M) Sdn Bhd as Finance Manager
Prof. Ir. Dr. Ahmad Fadzil Bin Mohamad Hani	8 July 2005	Non-independent Non-executive Director	<ul style="list-style-type: none"> Lecturer in signal processing and researcher in image processing since 1984 Currently leads the Centre for Intelligent Signal and Imaging Research (CISIR)
Chang Mun Kee	25 Jun 2010	Independent Non-executive Director	<ul style="list-style-type: none"> Founder of MOL Online Sdn Bhd and Jobstreet.com Sdn Bhd Sits on the Board of Innity Corporation Bhd, Jobsreet Corporation Bhd and 104 Corporation in Taiwan

Source: Company

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