

# TZ Limited

## Unlocking its potential

Initiation of coverage

Tech hardware & equipment

11 September 2014

**Price** **A\$0.12**

**Market cap** **A\$46m**

A\$1.81/£

Net cash (A\$m) at 30 June 2014 2.6

Shares in issue 384.9m

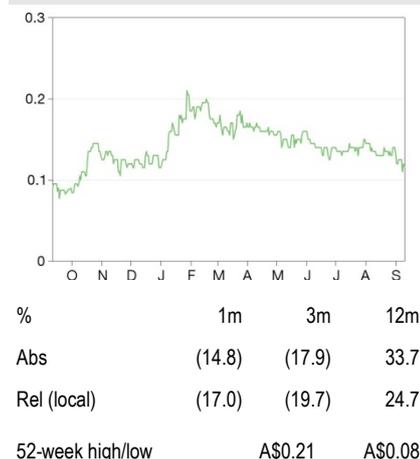
Free float 55%

Code TZL

Primary exchange ASX

Secondary exchange N/A

### Share price performance



### Business description

TZ Limited designs and produces intelligent, locking and fastening systems using its proprietary and patented technology. The three business units are infrastructure protection (IXP), packaged asset delivery (PAD) and aero asset maintainability.

### Next event

Interim results February 2015

### Analysts

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After a major restructure and rebuilding of the business in 2009, TZ seems to be turning the corner. There is strong growth in both its infrastructure protection (IXP) and packaged asset delivery (PAD) divisions, and with operational leverage, numerous significant contract opportunities and potential to license its technology to third parties there are many reasons to be optimistic. The timing and value of contracts are difficult to predict, but given the expanded roll-out potential with its already impressive client base (Microsoft, Cisco, Singapore Post) there is opportunity for growth even without signing significant new customers. Effective execution and cash flow management will be key to sustained share price growth, but announcements of significant new contracts could be short-term catalysts.

Year end	Revenue (A\$m)	PBT* (A\$m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
06/13	3.0	(10.1)	(5.9)	0.0	N/A	N/A
06/14	10.0*	(6.6)	(2.5)	0.0	N/A	N/A
06/15e	15.0	(2.4)	(0.6)	0.0	N/A	N/A
06/16e	26.1	3.6	0.8	0.0	15.1	N/A

Note: \*PBT and EPS are normalised, excluding acquired intangible amortisation, exceptional items and share-based payments.\*Includes A\$1.5m of 'Other Income' related to FV gain of derivative liabilities.

## Smart locking and fastening device

TZ's core technology is a smart material actuated, small form-factor, intelligent locking and fastening device. It owns a number of patents around the locking mechanism, its embedded intelligence and the wide range of potential applications. The company's strategy is to first commercialise the technology in two applications, parcel lockers (PAD division) and data centre cabinet security (IXP division), and then start licensing the technology to third parties. If this model is successful it should generate a high-margin recurring licensing revenue stream.

## Revenue forecast to increase 1.5x to A\$25m by FY16

TZ's IXP and PAD divisions have grown from c A\$450k and c A\$321k respectively in FY11 to total sales and secured POs of A\$2.7m and A\$8.4m in FY14. This is annual growth of c 82% in IXP and 197% in PAD. Contracts are generally on a site by site basis (ie there is no guarantee of volume), but the cost of integrating a new system incentivises customers to stick with TZ for further roll outs. Sales to existing customers are therefore a key growth opportunity and our forecasts assume expansion of roll-outs with Indonesia Post, Singapore Post, Italy Post and Westpac.

## Valuation: 8.6x FY16 EV/EBITDA, 15.1x P/E

TZ is currently trading at 1.6x FY16 EV/sales, 8.6x EV/EBITDA and 15.1x P/E. There are no directly comparable listed peers, however, and therefore we view a DCF with sensitivity analysis as the most useful valuation tool. Our bull case DCF valuation (A\$0.70) assumes expansion into new applications such as healthcare, residential etc, while our base case (A\$0.25) and bear case (A\$0.08) assume more moderate growth of new applications and reduced growth with existing customers in both PAD and IXP.

**TZ Limited is a research client of Edison Investment Research Limited**

## Investment summary

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### Company description: Smart locks and fasteners

TZ Limited is a designer and producer of smart locking and fastening systems. The systems are based around innovative shape memory alloy (SMA) actuation and include embedded intelligence at the lock level, networking hardware and back end management software to enable access, auditing and remote control. TZ provides the hardware and software as a complete system, which once integrated into a client's systems provides a compelling motivation for clients to retain TZ as a supplier in further roll-outs. It has been granted 49 patents and has 178 pending in relation to the fastening mechanisms, embedded intelligence and the application of SMA actuation. The two broad applications that TZ is focusing on at the moment are smart lockers and locking systems for data centre racks. The technology has a broad range of applications however, and has previously been used in aircraft component fastening and in the automotive sector for rapid configuration purposes.

### Financials: 76% estimated revenue growth in FY15

Operating revenue (excluding fair-value movements in derivative liabilities) for FY14 was A\$8.5m with A\$3.3m of secured purchase orders and contracts, which is 247% growth from FY13. Significant contracts and trials have also been announced with Westpac, Poste Italiane, Pos Indonesia and a US logistics company, which could drive strong growth in FY15 and FY16. The value of these contracts is unknown, but we estimate that Poste Italiane and Pos Indonesia combined (if the trials are successful and roll-out is extended) could be worth up to A\$90m in revenue spread over a number of years. Our A\$15m FY15 revenue forecast is based on a successful Westpac, Pos Indonesia and Poste Italiane roll-out and our FY16 forecasts are based on further expansion of roll-outs for these customers and the roll-out of lockers for an undisclosed US postal logistics company. There is a high degree of uncertainty over the speed and value of roll-outs but there is little doubt of the sizeable opportunity. At 30 June 2014 the cash balance was A\$2.6m and the free cash outflow in FY14 was A\$8.1m.

### Sensitivities: Cash flow and execution

**Cash flow:** We do not forecast TZ to be cash flow positive until 2016 and strict cash control and working capital management will be required to ensure sufficient liquidity. This could be a barrier to growth if clients do not accept payment terms or extra funding cannot be found. **Lumpy revenue:** TZ currently has a low revenue base and each customer won and lost can have a material impact on the business, and therefore earnings may be volatile and are difficult to predict. **Competition:** There is a high level of competition in the smart locker space in particular, and it may become increasingly difficult for TZ to win contracts at competitive rates. **Corporate governance:** Currently the business has a small company board structure with no independent non-executive directors.

### Valuation: 1.6x FY16e EV/sales, 8.6x EV/EBITDA, 15.1x P/E

TZ is currently trading at 2.8x FY15e EV/sales, falling to 1.6x in FY16e. There are no directly comparable peers due to the variety of markets it operates in. It could be seen as a combination of hardware and software and therefore the global small- and mid-cap hardware and software sector could be used as a basis for comparison. The software sector is trading at an average FY16 P/E of 17.3x and the hardware sector at 13.1x. TZ is therefore at a 13% discount and 15% premium to small- and mid-cap software and hardware respectively. A reverse DCF using a WACC of 12% and 3% terminal growth implies that a five-year revenue CAGR of 13% at a terminal EBITDA margin of 20% is required to justify the current share price. Our bull, base and bear case DCF scenarios produce valuations of A\$0.70, A\$0.25 and A\$0.08 respectively. The bull case is based on extended roll-outs with existing customers with expansion into new applications. The base case assumes approximately 50% of the unit volume of the bull case, with a further reduction for the bear case.

## Company description: Smart locks and fasteners

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TZ Limited is a designer and producer of SMA-based smart locking systems, which include hardware with embedded intelligence and software for lock management and auditing. SMA actuators are low cost, energy efficient and small in size. It owns key patents around SMAs, embedded intelligence and networking and fastening mechanisms. Its strategy is to demonstrate the technology by building businesses in specific verticals (at the moment in smart lockers and data centre sectors) and then forming joint ventures or selling the businesses to third parties. The spun-off companies will continue to pay annual recurring licence fees to TZ. The process will then be repeated for other verticals, which should in the long term provide TZ with a high level of high-margin, recurring revenue. Its key competitive advantage is that it is the only company able to provide end-to-end solutions that use low-cost, energy efficient SMA actuated locking mechanisms and control software that can be integrated into the company's IT infrastructure.

### Shape memory alloys

Shape memory alloys (SMAs) are materials that change shape when heated to a transition temperature but return to their original shape when cooled. This predictable behaviour can be used to implement various types of actuating mechanisms. The key advantage is low cost, energy efficiency and small form factor compared to motors and solenoids, which provide similar actuation. According to management and depending on the application, SMA actuators can be a 10th of the price, a 10th of the volume and a 100th of the weight of a motor or solenoid while delivering similar performance. A nickel-titanium alloy known as nitinol was the first SMA to be widely used. It was discovered in the early 1960s by the US Naval Ordnance Laboratory and is used in a wide variety of applications including orthodontic wires for braces, frames for glasses and medical tweezers. TZ's patents are related to proprietary devices using SMA actuation as well as the associated electronics that enable embedded intelligence, networking and software control.

### History

The technology behind TZ was developed by former CTO Dickory Rudduck and patented by him in 1998. In late 1999 he formed TZ with co-founder John Wilson, built the technology platform and grew the business to the point in 2004 when it reversed into ASX-listed CED Austrasia Limited. In 2005 TZ granted exclusive global distribution rights to Textron Fastening Systems (TFS) across all verticals for a consideration of US\$10m, ongoing royalties on hardware and software sales and retained product development services. TZ bought back the technology licence along with the R&D teams in 2007 after TFS decided to divest that part of its business. The financial crisis of 2008 then hit and TZ started to struggle in its two key markets, automotive and aerospace. In 2009 after an interest payment default to a major convertible noteholder, New York based hedge fund QVT, the existing board was forced to resign and current Chairman Mark Bouris and Executive Director Kenneth Ting were appointed. Soon after their appointment the directors discovered several accounting irregularities at which point the company suspended trading and commenced the process of restructuring and rebuilding, ultimately returning to trading on the Australian Stock exchange in 2010. The former chairman, Andrew Sigalla, has been charged with making A\$6m of unauthorised payments to himself from TZ Ltd accounts between March 2008 and March 2009. The case is currently being processed in the Australian courts. In the last three years as part of debt restructure, QVT has converted all of its notes to equity and the company is currently debt free. QVT as a result is the largest shareholder, with 43% of the shares outstanding. The legal and financial issues of 2009 and 2010 were very disruptive to the business at the time, but the board has since re-capitalised the business and focused on commercialising the technology in the core business areas of parcel lockers and infrastructure protection.

## Strategy

TZ's current focus is to commercialise the concept and technology in two main areas: data centre infrastructure protection (IXP), where it believes it is the market leader, and packaged asset delivery (PAD), where it is one of many providers battling for market share. TZ has also recently acquired Infinity Design consultancy to assist in developing the product portfolio within its target verticals. Aerospace asset maintainability is another segment of the business where work is still being conducted, but it is not expected to be the core driver of growth in the short to mid-term. Both data centre security and packaged asset delivery were selected to take advantage of the growth in e-commerce. Ultimately TZ is looking to license its technology to one of the large industrial players to receive ongoing royalty fees. If this were achieved TZ could generate substantial high-margin recurring revenue.

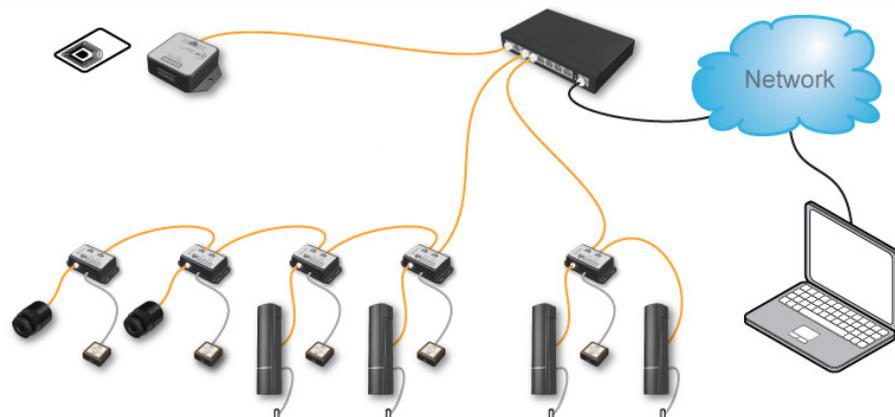
## Supply chain and distribution strategy

TZ either deals direct on a project basis or uses distribution and integration partners to sell its smart locking system solutions, but software is always licensed directly to the end-user. The largest of the distribution partners is US\$3.3bn market cap Anixter (AXE: NYSE), which sells 450,000 products in over 50 countries. It also works with data centre managers such as ControlCircle (UK) and Bluelock (US). ControlCircle has 11 data centres globally and selected TZ's solution to deliver the level of protection required by Payment Card Industry Data Security Standards (PCI-DSS). The feedback provided to TZ on why its solution was selected was because it provided superior functionality at lower cost. Sales of its smart lockers are also made through integration partners in markets where TZ does not have an on-the-ground presence. The Italian and Indonesian programmes were won through integration partners. The integration partner manages the day-to-day operation of the lockers and their deployment. Manufacturing is outsourced to third parties under flexible contract structures to reduce the sensitivity of the business to fluctuating demand.

## Infrastructure protection: TZ Centurion and TZ Praetorian

The two main product categories within the IXP division are TZ Centurion and TZ Praetorian. Both provide access control to data centre cabinets. The Praetorian system is used for integration with third-party access control systems and the Centurion System is used for standalone access control and environmental monitoring. The Centurion system comprises a 'bridge' (the computer that controls access and provides the network interface to the end user), an 'RFID reader' to read the access cards, interconnect modules to connect locks, sensors and other accessories if required and the locks themselves. Software is also provided, which allows remote users to control and monitor access to the racks and sensors. TZ is the only provider of rack level locking systems that have decentralised intelligence, allowing for easier scalability and more competitive pricing.

**Exhibit 1: Typical system diagram**



Source: TZ Limited

## Packaged asset delivery

Secure lockers represent a broad market with varied use-cases such as employee lockers in large corporations, lockers for university students, residential postal lockers and – the largest potential segment – last mile delivery boxes for national postal operators. Each application has different market dynamics, but the technology behind them is fundamentally the same. The system typically comprises a locker bank with control terminal and back-end server interface to control and monitor access. Singapore Post is one of the key contracts TZ has won in the secure locker market segment. An example of its implementation of the system (branded POPStation) is shown in Exhibits 2 and 3. TZ provides the whole system to its customers but manufacture is outsourced to third parties in the US and China. Only retailers that have signed up to use the service can deliver to POPStation lockers. When the parcel is delivered into a locker a text and email notification are sent to the recipient, providing them with a code to access their parcel.

**Exhibit 2: Singapore Post implementation of secure lockers using TZ technology**



Source: TZ Limited

**Exhibit 3: User interface for Singapore Post implementation**



Source: TZ limited

## Trials in Indonesia and Italy

In January 2014 TZ announced that its integration partner in Italy (FBA Italy) was awarded the tender for an initial pilot of smart parcel lockers for Poste Italiane. As part of the pilot TZ will supply five locker banks and if the pilot is successful the lockers could be rolled out across Italy. On 20 January 2014 TZ's integration partner in Indonesia (Gunnebo Indonesia) was contracted to supply smart lockers as part of Pos Indonesia's pilot. The number of lockers that could ultimately be rolled out and under what terms are unknown, but Indonesia has a population of c 250 million people compared to 60 million in Italy and six million in Singapore, so if the trial is successful it could be a significant boost to TZ's revenues.

## Westpac employee day locker contract

At the end of May TZ announced that it received an order from ACG Fire and Security Pty Limited for the supply of employee day lockers for its client Westpac in its offices in Melbourne and Sydney. Westpac had 36 thousand employees as at 30 September 2013, six thousand of which are in its head office in Sydney. Assuming all of these will move to the new building and be provided with a locker at an ASP to TZ of A\$400 per locker, the contract could be worth c A\$2.4m. The size of the Melbourne office has not been disclosed but could be worth a similar value based on the number of employees. If all employees throughout the company are provided with lockers, the total value could be worth significantly more. We currently assume only the Sydney and Melbourne offices are fitted with lockers in FY15 with a roll-out of equivalent size in FY16.

## A.D.A.M. parcel locker network

TZ has also started to implement its own network of lockers within Australia, branded as A.D.A.M. Currently 10 lockers are operational, most of those in Sydney. A strategic partnership has been formed with Temando to accelerate the use of the A.D.A.M. network. Temando provides shipping

software to the e-commerce industry to assist in delivery logistics, and its products can be integrated into many of the e-commerce and ERP tools such as Magento, IBM Websphere, Oracle ATG Webcommerce, Demandware and NetSuite. It therefore allows retailers to easily implement a solution to deliver to the A.D.A.M. network.

## **Infinity Design**

Infinity was a product development company that was acquired by TZ for A\$300k in cash and A\$200k in shares in July 2013. This was following the sale of its previous design and engineering consultancy PDT for A\$3.5m in May 2013. Infinity is used for external consultancy design work, but also to develop and expand the product range within the target segments. In the medium to long term it will also be used to develop products that use TZ's IP outside the initial target segments.

## **Market**

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### **Market strategy**

The market potential for smart locking and fastening systems is very broad and TZ has already worked on solutions for the aerospace and defence, construction and healthcare industries, among others. The main focus at the moment is data centre security and packaged asset delivery, due to their high growth potential.

### **Infrastructure protection (IXP)**

With the growth of shared data centres and the increase in e-commerce generally, there is an increased requirement for cabinet level security rather than room level security. Traditional keys are impractical at this level and make auditing access control very difficult, which is becoming increasingly important as more companies become aware of data security issues. A fully automatic electronic lock can simplify access management and ensure auditing requirements are met, which is a key requirement of a number of regulations including the Payment Card Industry Data Security Standard (PCI-DSS). This can be implemented using traditional motors or solenoids, but TZ's SMAs have the advantage of being smaller and cheaper. TZ estimates that total data centre infrastructure spend is around US\$16bn to US\$18bn a year and 2m units (racks) are installed each year on an installed base of 20m units. Using these assumptions and an average cost per rack of A\$800, TZ estimates their market opportunity to be c A\$1.6bn. Frost & Sullivan estimates that the number of rack units deployed globally will grow at a c 7% CAGR over the next six years, but the growth of electronic locks will be even greater due to growing market penetration from a low base.

### **IXP competition**

The electronic lock market is very fragmented, but TZ identifies RCI and EMKA as its primary competitors in the IXP segment. EMKA provides a wide range of locking components including a solenoid-based electronic locking system that provides similar functionality to TZ's solutions but does not have the distributed intelligence of TZ's system, which enables more scalable installation. RCI provides an easy to install battery powered solution that does not require any additional cabling, but as a result has limited remote monitor and control interface. It is more of a direct replacement for mechanical locks rather than a more comprehensive security solution.

### **Packaged asset delivery (PAD)**

The last mile of delivery is a significant cost of e-commerce. Delivering packages to secure lockers at locations such as shopping centres instead of to the home helps to reduce the cost and increase the convenience to consumers. Numerous national postal services as well as private operators have started to implement secure lockers for the last mile of delivery. At the moment most roll-outs

have been in Europe because of the relative maturity of the e-commerce market. The maturity of the market means competition is intense and growth is expected to be lower than that in Asia where e-commerce is less prevalent. TZ is therefore focused on Asia where it has already won the Singapore contract and a trial in Indonesia. Some of the key manufacturers of lockers (which are predominantly focused on the European and US market) are shown in Exhibit 4. If TZ can emulate what these European and US companies have done in Asia, and put its lockers into 2,000-5,000 locations compared to its current c 100 locations, it would be transformational for the business.

**Exhibit 4: PAD competitors**

Competitor	Scale	Comment
KEBA	1,500 locations in France, 2,650 in Germany	KEBA's first-large scale roll out is in France where initially 1,500 machines are expected to be installed. The installation is part of a partnership with Neopost, market leader in the manufacture of mailroom equipment and logistics systems. It was also partner with DHL for the implementation of the Packstation network in Germany, where 2,650 units are installed. DHL has plans to expand the network into Italy and Amsterdam, but has decided to design its own system with the assistance of design firm Polygon. The KEBA solution is also used in c 500 stations for Døgnposten (Post Denmark), 150 locations in Russia (branded Logibox), 105 locations in Austria (branded Post.24), 28 machines in Luxembourg (branded PackUp and BPM Parcelstation) and 71 in Lithuania (branded LP Express).
ByBox	57,000 lockers in 20 countries	ByBox manages electronic lockers for a number of national operators across Europe. It was established in 2000. ByBox claims to deliver over 20m vital parcels a year.
Amazon Locker	Unknown	Amazon started piloting the deployment of its own locker network at the end of 2011. The total number of locations installed has not been disclosed, but so far it only appears to be available in a limited number of cities in the US and UK. The lockers are also only available for use for Amazon customers.
InPost (part of Integer.pl Group)	2,750 locations worldwide	InPost Parcel lockers are available in 15 countries worldwide in nearly 2,750 locations. It is hoping to launch 16,000 new locations in Europe in the next four years and 10,000 lockers are planned in the US by the end of 2016. InPost is part of the Integer.pl group, which is listed in Poland.

Source: postandparcel.info

## Management

The current board has extensive experience in investment management and cultivating start-ups.

- Mark Bouris (chairman and executive director) has founded two successful Australian companies; he founded Wizard Home Loans in 1996, and it went on to become one of Australia's largest non-bank lenders. It was acquired by GE for A\$500m in 2004. He then founded wealth management company YellowBrickRoad (ASX: YBR) in 2007, where he is still chairman. In addition he is non-executive chairman of Anteo Diagnostics Limited (ASX: ADO) and Serena Resources Limited.
- Kenneth Ting (executive director and company secretary) has a background in accounting, law and investment banking, with a focus on the commercialisation of technology and public and private equity raisings. Mr Ting joined Deutsche Bank in 1997 after four years at PricewaterhouseCoopers' corporate finance and tax division. He was vice president of technology investment banking at Deutsche Bank and worked in Deutsche Bank's Sydney, San Francisco and London offices. He is also non-executive director of Serena Resources.
- John Wilson founded TZ Limited with Dickory Rudduck and was appointed interim CEO after the reorganisation in 2010. He resigned as CEO in May 2012 following health problems, but continues to work with TZ as a consultant and manages the day-to-day operations.
- Paul Casey was appointed non-executive director in May 2013 and has 30 years' experience in the travel and tourism industry. He ran a travel software start-up in Bangkok and was CEO of an investment firm focused on the travel industry.

## Sensitivities

- **Cash flow** – We do not forecast TZ to be cash flow positive until 2016 and strict cash control and working capital management will be required to ensure sufficient liquidity for expansion. This could be a barrier to growth if clients or suppliers do not accept payment terms or extra funding cannot be found.

- **Lumpy revenue** – TZ currently has a low revenue base and therefore each new customer could have a material impact on revenues and therefore earnings growth is likely to be volatile. Singapore currently accounts for a dominant share of PAD revenue, which as a whole accounted for 66% of revenue in H114. Replacement roll-outs will be needed to compensate for Singapore as it winds down. The numerous opportunities on the horizon (Italy, Indonesia, WestPac, US logistics company) mitigate this risk in the medium term.
- **Competition** – There is a high level of competition in the smart locker space in particular, and it may become increasingly difficult for TZ to win contracts at competitive rates. Its low-cost SMA technology and focus on the high-growth Asian market, which is less competitive than Europe or the US, could help the company defend against this.
- **Corporate governance** – TZ is a small company and has decided not to implement full recommended corporate governance structures. It does not have any independent directors and the chairman is also an executive director. There are only three members of the board and no audit committee or remuneration committee. As a small company this may be acceptable in the short term, but as the business grows we would hope to see independent non-executive directors brought onto the board and a more formal structure put in place.

## Financials

### P&L

Exhibit 5 shows our revenue forecasts broken down by business unit – PAD, IXP and Infinity. The total of secured purchase orders (POs) and recognised revenue in FY14 was A\$11.8m, including A\$3.3m of backlog. The lead time for IXP projects can vary significantly depending on the speed of the roll out. The bottleneck tends to be more the integration side than the delivery of components from TZ. Most PAD related revenues for FY14 relate to the Singapore Post contract, which has been extended into FY15. The average price of each locker bay varies significantly depending on size, but we have assumed an ASP per locker bay of A\$40k. Some of the larger locker bays already in use have been sold for over A\$100k.

	FY14	FY15e	FY16e
IXP	2.4	3.5	4.9
PAD	5.4	11.4	21.2
Infinity	0.7	0.2	0.1
<b>Total</b>	<b>8.5</b>	<b>15.0</b>	<b>26.1</b>

Source: Edison Investment Research, TZ Limited interim report

Our FY15 forecasts assume an extension of the Singapore, Indonesian and Italian contracts, with an additional 100, 40 and 40 lockers bays being deployed respectively. We assume a A\$2.4m revenue contribution from the Westpac contract (based on a A\$400 per locker cost for five thousand employees) and \$A1.2m from other smaller contracts. FY16 revenue is based on further expansion of Indonesia Post and Italy Post deployments (with 100 lockers each) as well as 120 locker bays deployed for the undisclosed US logistics company and 7,500 individual lockers for Westpac and other corporates. There is a high degree of uncertainty over the timing and value of these roll-outs, but there is little doubt that each could be a significant contributor to revenue. Exhibit 8 shows a scenario analysis given different speed of roll-outs.

### Rome, Milan and Jakarta combined could be worth three times Singapore

Exhibit 6 compares the population density of Singapore, Italy and Indonesia. While the population density of Singapore as a whole is higher than that of Indonesia or Italy, Jakarta alone has a population 1.8x bigger than that of Singapore and at a higher density. Density of population and degree of e-commerce usage is important as it makes the economic case for secure locker bays

stronger. Using the number of cities with a population above 500,000 as a crude estimate of potential market size, Italy has six and Indonesia 25. It is quite conceivable therefore that Italy and Indonesia combined could be worth up to 15x the value of the Singapore contract (assuming similar distribution density of lockers and the average city size is half that of Singapore). We estimate the Singapore contract to be worth c A\$6m and therefore Italy and Indonesia could be worth a total of A\$90m spread over a number of years. Looking at it on a city-by-city basis, Rome, Milan and Jakarta combined could be worth three times the whole of Singapore. The success of the pilots and ability to execute on those potential contracts is key to driving long-term revenue growth.

#### Exhibit 6: Country population and city comparison

Country/city	Population (m)	Land area (sq km)	Population density (people/sq km)	Estimated number of locker locations	E-commerce market value (estimate)
<b>Singapore</b>	<b>5.6</b>	<b>687</b>	<b>8,200</b>	<b>100</b>	<b>US\$7m</b>
<b>Italy</b>	<b>61.7</b>	<b>301,000</b>	<b>205</b>	<b>300</b>	<b>€8,300m</b>
Rome	3.3	1,285	2,567	187	
Milan	2.9	182	16,005	26	
<b>Indonesia</b>	<b>253.6</b>	<b>1,811,569</b>	<b>140</b>	<b>1,200</b>	<b>\$1,000-3,000m</b>
Jakarta	9.8	664	14,712	97	

Source: CIA Fact book, Encyclopaedia Britannica, Edison Investment Research, e-commerce market value estimates from FT.com (Indonesia), Ministry of Foreign Affairs (Singapore), TheNextWeb (Italy). Note: 100 locker locations for Singapore have been disclosed. Figures for Indonesian and Italy are our estimates.

The pilot for Pos Indonesia started in April 2014 and for Poste Italiane in May 2014, so if successful full-scale roll-out would not be expected to start until late CY14/15. The Singapore Post trial started in early 2013 and the second phase was announced in May 2013.

#### Revenue visibility in IXP less clear

Revenue visibility in the IXP segment is less clear since the majority of sales currently go through distributors (which purchase at a discount and re-sell with a mark-up). IXP revenue doubled between FY12 and FY13 and doubled again between FY13 and FY14. Given the lack of visibility for FY15 we have conservatively assumed a below-trend growth rate of 40% in FY15e. The signing up of just one large project could mean this is exceeded. FY16e figures also assume a below-trend growth rate of 40%, so there is upside potential here also.

#### Potential for high-margin, recurring revenue

The long-term strategy of spinning-off businesses once the application has been commercialised and receiving ongoing licence fees for use of the technology should provide a high level of high-margin, recurring revenue. The revenue profile will change as a result of selling only proprietary components, receiving licence fees and royalties compared to the full system sale, but the majority of the profit should be retained as a result of the higher margins. Given the current early stage of development for both PAD and IXP, we do not expect this to occur within our forecast time horizon.

#### Expenses and gross margins

Cost of goods sold is sensitive to the mix of products, but has over the last two years ranged between 50% and 70% of sales of IXP and corporate and postal storage lockers. Postal lockers are lowest margin because this is typically secured through competitive tender, and corporate lockers are the highest margin. Manufacturing of components is outsourced to third parties and is in the process of being moved to a Chinese supplier instead of the current US supplier. While this is not without its risks, management expects it could result in manufacturing cost savings of up to 50%. We have modelled this as an increase in product gross margins from 50% in FY14 to 54% in FY15e and 57% in FY16e. Employee costs are the main ongoing operational expense; there are currently 42 employees, which we expect to increase to 45 in FY15e and 48 in FY16e.

## Balance sheet and cash flow

At 30 June 2014 TZ had A\$2.6m of cash and no debt. Net cash used in operations for the year was A\$6.7m, and a further A\$1.5m was used for acquisitions, R&D and capex. An EGM was held on 17 February 2014 to approve the conversion of the A\$17.9m of debt due to hedge fund QVT to equity. The conversion was approved and as a result QVT is a 43% shareholder. In addition, 25m shares were placed at A\$0.15 on 22 April 2014 raising A\$3.75m gross. Typically deposits for large projects are paid upfront and working capital is managed to minimise the level of new funding required. Management also intends to keep capex and development expenditure under control until profitability is reached so that additional funding will not be required unless a significant opportunity arises that needs additional funding.

## Valuation

Exhibit 7 compares the key valuation multiples for TZ, its closest listed peer in the postal locker market (Integer pl SA), and Kaba Holding AG, which produces access controls systems including electronic locks. Comparative multiples for the small- and mid-cap global hardware and software markets have also been included. TZ's business model has characteristics similar to each of these different sectors, so its long-term valuation multiples should be a mix of those below. TZ is currently trading at a premium to both software and hardware global small- and mid-cap companies on an FY16e P/E basis, but at a 62% discount to its closest peer Integer. Given the high pace of growth expected and the lack of directly comparable peers, we see a DCF with sensitivity analysis as the most useful tool for valuation purposes.

**Exhibit 7: Peer comparison**

	FY15e sales (A\$m)	EV/sales FY15	EV/sales FY16	EV/EBITDA FY15	EV/EBITDA FY16	P/E FY15	P/E FY16	CY EPS growth	FY14-15e rev growth
TZ Ltd	15.0	2.8x	1.6x	N/A	8.6x	N/A	15.1x	N/A	50%
Integer pl SA	309.8	3.6x	2.2x	32.7x	12.8x	79.0x	39.9x	97.8%	66%
Kaba Holding AG	1264.9	1.7x	1.6x	10.8x	9.8x	19.9x	17.4x	14.4%	6%
Small- and mid-cap global software		2.4	2.2x	11.9x	9.5x	21.5x	17.3x	30.7%	
Small- and mid-cap global hardware		1.1	1.0x	8.0x	6.1x	16.0x	13.1x	17.2%	

Source: Edison Investment Research, Bloomberg. Note: Prices as at 10 September.

## DCF scenario analysis

**Exhibit 8: Scenario comparison**

Scenario	2020 revenue (A\$m)	Rev CAGR FY15-20	DCF valuation (A\$/share)	% Δ to share price	Assumptions underlying valuation (sales figures are cumulative to 2020)
Bull case	117.2	50.9%	0.70	508.1%	25% long-term EBITDA margins, 941 locker banks in Indonesia, 541 in Italy, 2,320 in US for 'logistics company', 112k individual lockers used in a variety of applications including healthcare, residential, employee day lockers etc. IXP CAGR of 50%.
Mid case	50.5	26.7%	0.25	113.0%	21% long-term EBITDA margins, 541 locker banks in Indonesia, 341 in Italy, 920 for US 'logistics company', 68k individual other lockers. IXP CAGR of 40% to 2016 and 30% to 2020.
Bear case	21.9	16.7%	0.08	--	20% long-term EBITDA margin, 280 locker banks in Indonesia and Italy. 300 for 'logistics company', 24k individual other lockers. IXP CAGR of 10%.
Reverse DCF	25.9	13%	0.12	N/A	20% long-term EBITDA margin, 280 locker banks in Indonesia and Italy, 300 for US 'logistics company', 25k individual other lockers. IXP CAGR of 20%.

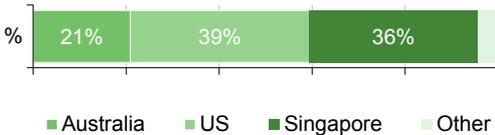
Source: Edison Investment Research

Exhibit 8 shows a DCF valuation for a range of scenarios. We have used a WACC of 12% and a terminal growth of 3%. The reverse DCF scenario captures assumptions that we believe are currently being priced into the share price. All these scenarios are dependent on either working capital being managed or additional funding being obtained to accelerate growth. The catalysts required for the share price to reach these valuations are announcements of contract wins that quantify the value and financial impact of those roll-outs.

**Exhibit 9: Financial summary**

	A\$000s	2012	2013	2014	2015e	2016e
Year end 30 June		AUS GAAP				
<b>PROFIT &amp; LOSS</b>						
Revenue		6,383	2,967	9,984	15,000	26,127
EBITDA		(3,298)	(5,348)	(3,350)	(1,002)	4,814
Operating Profit (before amort. and except.)		(4,366)	(6,388)	(4,495)	(2,428)	3,632
Intangible Amortisation		0	0	0	0	0
Exceptionals		(1,783)	(6,455)	(5,129)	(773)	(773)
Other		(1,396)	(6,680)	0	0	0
Operating Profit		(7,545)	(19,523)	(9,624)	(3,201)	2,859
Net Interest		(4,815)	(3,675)	(2,112)	0	0
Profit Before Tax (norm)		(9,181)	(10,063)	(6,607)	(2,428)	3,632
Profit Before Tax (AUS GAAP)		(12,360)	(23,198)	(11,736)	(3,201)	2,859
Tax		(1)	(6)	(53)	0	(572)
Profit After Tax (norm)		(9,182)	(10,069)	(6,660)	(2,428)	3,060
Profit After Tax (AUS GAAP)		(12,361)	(23,204)	(11,789)	(3,201)	2,287
Average Number of Shares Outstanding (m)		128.7	170.9	268.6	384.9	384.9
EPS - normalised (c)		(7.1)	(5.9)	(2.5)	(0.6)	0.8
EPS - normalised and fully diluted (c)		(7.1)	(5.9)	(2.5)	(0.6)	0.8
EPS - (US GAAP) (c)		(9.6)	(13.6)	(4.4)	(0.8)	0.6
Dividend per share (c)		0.0	0.0	0.0	0.0	0.0
EBITDA Margin (%)		N/A	N/A	N/A	N/A	18.4
Operating Margin (before GW and except.) (%)		N/A	N/A	N/A	N/A	13.9
<b>BALANCE SHEET</b>						
Fixed Assets		22,256	8,482	8,774	7,598	6,666
Intangible Assets		19,553	7,590	7,253	6,038	5,064
Tangible Assets		1,575	474	1,257	1,296	1,337
Investments		1,128	418	264	264	264
Current Assets		6,790	5,639	6,150	4,804	8,816
Inventory		342	402	394	2,298	3,442
Debtors		5,544	823	2,876	1,250	2,177
Cash		904	4,146	2,646	1,023	2,963
Other		0	268	234	234	234
Current Liabilities		(16,550)	(16,811)	(2,254)	(2,812)	(3,603)
Creditors		(6,169)	(5,166)	(2,254)	(2,812)	(3,603)
Short term borrowings		(10,381)	(11,645)	0	0	0
Long Term Liabilities		(6,101)	(6,878)	(207)	(62)	(62)
Long term borrowings		(3,720)	(5,599)	0	0	0
Other long term liabilities		(2,381)	(1,279)	(207)	(62)	(62)
Net Assets		6,443	(9,568)	12,463	9,529	11,816
<b>CASH FLOW</b>						
Operating Cash Flow		(9,157)	(4,936)	(6,488)	(1,373)	2,762
Net Interest		(602)	(103)	(135)	0	0
Tax		(19)	15	(53)	0	(572)
Capex		(570)	(718)	(1,460)	(250)	(250)
Acquisitions/disposals		0	4,594	0	0	0
Financing		9,904	5,613	6,636	0	0
Dividends		0	0	0	0	0
Net Cash Flow		(444)	4,465	(1,500)	(1,623)	11,940
Opening net debt/(cash)		9,789	13,197	13,098	(2,646)	(1,023)
HP finance leases initiated		0	0	0	0	0
Other		(2,964)	(4,366)	17,244*	0	0
Closing net debt/(cash)		13,197	13,098	(2,646)	(1,023)	(2,963)

Source: Edison Investment Research, TZ Limited accounts. Note: \*Non-cash impact of debt-equity conversion of QVT loan.

Contact details	Revenue by geography
Level 11, 1 Chifley Square Sydney, NSW 2000 Australia +61 2 9222 8890 www.tz.net	 <p>■ Australia ■ US ■ Singapore ■ Other</p>

CAGR metrics	Profitability metrics	Balance sheet metrics	Sensitivities evaluation
EPS 12-16e	N/A ROCE 15e	N/A Gearing 15e	70.3% Litigation/regulatory
EPS 14-16e	N/A Avg ROCE 12-16e	N/A Interest cover 15e	2.5 Pensions
EBITDA 12-16e	N/A ROE 15e	N/A CA/CL 15e	2.5 Currency
EBITDA 12-14	N/A Gross margin 15e	N/A Stock days 15e	62 Stock overhang
Sales 12-14e	32% Operating margin 15e	N/A Debtor days 15e	56 Interest rates
Sales 12-16e	55% Gr mgn / Op mgn 15e	N/A Creditor days 15e	56 Oil/commodity prices

Management team
<b>Chairman and Executive Director: Mark Bouris</b> Mark Bouris has founded two successful Australian companies. In 1996 he founded Wizard Home Loans, which went on to become one of Australia's largest non-bank lenders. It was acquired by GE for A\$500m in 2004. He then founded wealth management company YellowBrickRoad (ASX: YBR) in 2007 where he is still chairman. In addition he is non-executive chairman of Anteo Diagnostics Limited (ASX: ADO) and Serena Resources Limited.
<b>Executive Director: Kenneth Ting</b> Kenneth Ting has a background in accounting, law and investment banking with a focus on the commercialisation of technology and public and private equity raisings. Mr Ting joined Deutsche Bank in 1997 after four years at PricewaterhouseCoopers' corporate finance and tax division. He was vice president of technology investment banking at Deutsche Bank and worked in Deutsche Bank's Sydney, San Francisco and London offices.
<b>Non-executive director: Paul Casey</b> Paul Casey was appointed non-executive director in May 2013 and has 30 years' experience in the travel and tourism industry. He ran a travel software start-up in Bangkok and was CEO of an investment firm focused on the travel industry.

Principal shareholders	(%)
QVT Fund	42.6
Deutsche Bank AG	6.8
Technical Invest PTY Ltd	4.3
SG Hiscock & Co Ltd	3.8
Kenneth Ting	0.9
Mark Bouris	0.7

Companies named in this report
DHL (GER: DPWX.N), Integer.pl (WSE: ITG), YellowBrickRoad (ASX: YBR), Anteo Diagnostics Limited (ASX: ADO)

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