

# FBR Limited (ASX:FBR)

## Aiming big! Revenue of A\$60bn pa

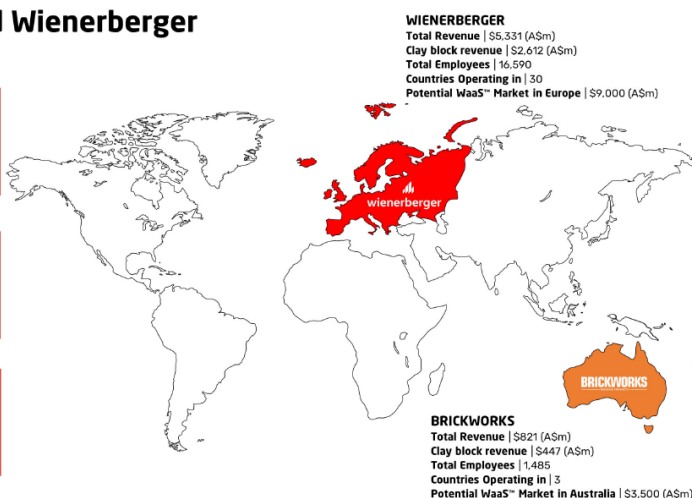
A recent (21 June 2019) presentation from FBR included several slides on the Hadrian X commercialisation strategy – Wall as a Service™. One slide which particularly caught our attention stated that the potential WaaS™ market in Australia and Europe - via JV agreements with Brickworks and Wienerberger - is A\$3.5bn and A\$9bn respectively. In addition, FBR is targeting 10% of the global market for low-rise construction over the next 15 years.

### Brickworks and Wienerberger

Approximately **500 billion** bricks/blocks are used per year in construction of **low-rise buildings** globally.

It is estimated that approximately **150,000 machines** would be required to replace wall-building labour for all low-rise construction.

FBR is targeting **10% of the global market** over the next 15 years.



FBR | Corporate Presentation

Source: Company

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Using FBR's estimate that approximately 150,000 machines are needed globally to replace wall-building labour for low-rise construction, FBR's global market share objective implies that the company is targeting to have some 15,000 Hadrian X machines operating by 2035. With only two (2) machines currently operating, the implied ramp-up profile is significantly more ambitious than our forecast; our base-case forecast assumes 10 machines operating by FY22, 25 by FY23, 50 by FY24 and 100 machines (our steady-state level) operating by FY25. At our estimate of A\$4m revenue per machine per annum (100% basis) and A\$2.5m in unit capex (100% basis), the potential revenue and capex costs associated with 15,000 machines is impressive...A\$60bn per annum and A\$40bn respectively. Clearly, hitting the 15-year target will require as much a manufacturing and financing strategy as a sales and marketing strategy.

### Risked SOTP target price: A\$0.17 (unchanged)

FBR believes that improved safety, speed, accuracy, lower costs and reduced waste associated with automation/robotization will transform the global construction sector over the next 15 years. However, bearing in mind the poor visibility on the timelines and milestones associated with FBR's WaaS™ commercialisation strategy, we maintain our view that a deep risk-discount should be attached to our A\$508m (28c per fully diluted share) NPV<sub>10</sub> valuation of FBR's Hadrian X technology. Nevertheless, our 50% risk-discounted target price of 17cps offers significant upside potential from current share price levels. We maintain a Speculative Buy (Higher Risk) recommendation. Risks to our earnings profile and target price include but are not limited to: success in sourcing building contracts, operational performance of Hadrian X, revenue profile (timing and quantum), operating costs and capex, dependence upon key personnel, competition from other technologies.

25 June 2019

Share Price: A\$0.077

Target Price: A\$0.17

**Targeted Upside: 119%**

**Recommendation**  
**Speculative Buy**

**Risk Assessment**  
**Higher**

**Construction Machinery/Technology**

David Brennan, CFA

Senior Investment Analyst

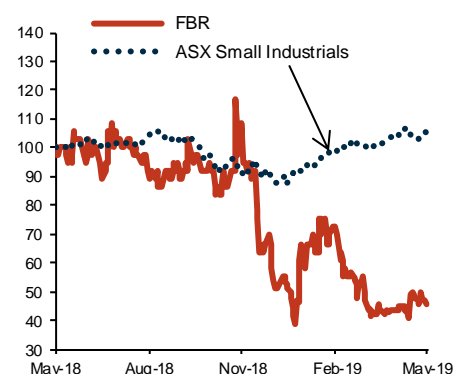
[dbrennan@stateone.com.au](mailto:dbrennan@stateone.com.au)

+61 (0)2 9024 9142

### FBR Limited

ASX Code	FBR
52-week range (A\$cps)	A\$0.07-A\$0.22
Fully diluted Market Cap (A\$m)	137
Fully diluted no. of shares (m)	1,785
Av Daily Turnover (shares)	4.0 million
ASX All Ordinaries	6,745
FY19E BV per share (A\$c)	2.6c
FY19E EPS (A\$c)	-0.8c
FY19E Net (Debt)/Cash (A\$m)	21.4

### Relative price performance Source: IRESS



**FBR Limited**  
 Year ending June

Profit & Loss Statement (A\$M)	FY18A	FY19E	FY20E	FY21E	FY22E
Revenue	0.5	0.0	4.8	11.1	37.7
Operating	0.0	0.0	(2.9)	(6.7)	(22.6)
R&D/Other	(4.0)	(8.0)	(7.0)	(5.0)	(5.1)
Employee/Directors	(1.6)	(6.0)	(7.0)	(7.1)	(7.3)
<b>EBITDA</b>	<b>(5.1)</b>	<b>(14.0)</b>	<b>(12.1)</b>	<b>(7.7)</b>	<b>2.7</b>
Depreciation & Amortisation	(0.0)	(0.5)	(0.5)	(0.5)	(0.5)
<b>Operating profit</b>	<b>(5.1)</b>	<b>(14.5)</b>	<b>(12.6)</b>	<b>(8.2)</b>	<b>2.2</b>
Royalties & Other (R&D rebate)	(2.0)	(1.0)	5.0	5.0	0.0
<b>EBIT</b>	<b>(7.1)</b>	<b>(15.5)</b>	<b>(7.6)</b>	<b>(3.2)</b>	<b>2.2</b>
Interest income	0.0	0.6	0.6	0.2	0.3
Interest expense	0.0	0.0	0.0	(0.6)	(1.5)
Tax expense	0.0	0.0	0.0	1.1	(0)
<b>Reported NPAT</b>	<b>(7.1)</b>	<b>(14.9)</b>	<b>(7.0)</b>	<b>(2.5)</b>	<b>0.7</b>
<b>Normalised NPAT</b>	<b>(7.1)</b>	<b>(14.9)</b>	<b>(7.0)</b>	<b>(2.5)</b>	<b>0.7</b>
EBITDA Margin (%)	na	na	na	na	7%
Operating profit margin (%)	na	na	na	na	6%
EPS Reported - Diluted (A\$)	(0.4)	(0.8)	(0.4)	(0.1)	0.0
<b>EPS Normalised - Diluted (A\$)</b>	<b>(0.4)</b>	<b>(0.8)</b>	<b>(0.4)</b>	<b>(0.1)</b>	<b>0.0</b>
EPS growth (%)	nm	nm	nm	nm	n/a
DPS - Declared (A\$)	0.0	0.0	0.0	0.0	0.0
Avg. no. of shares (m)	954	1,236	1,487	1,654	1,737
YE no. of fully-diluted shares (m)	1,617	1,785	1,785	1,785	1,785

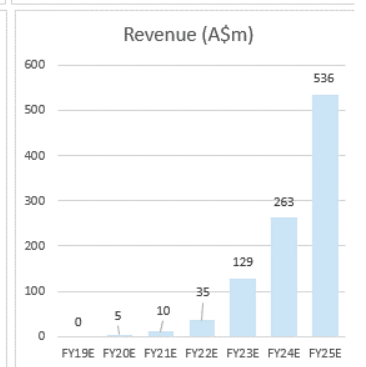
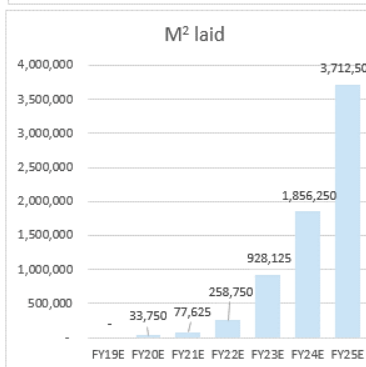
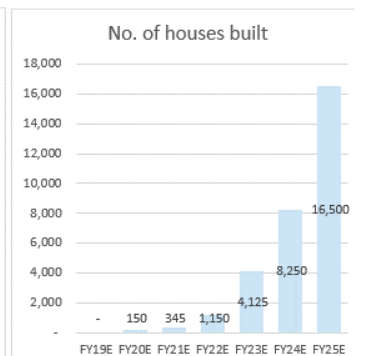
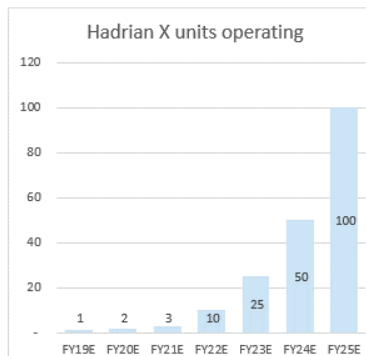
Cash Flow Statement (A\$M)	FY18A	FY19E	FY20E	FY21E	FY22E
EBITDA	(5.1)	(14.0)	(12.1)	(7.7)	2.7
Investment in working capital	(5.4)	6.9	(0.3)	(1.1)	(0.7)
Tax expense	0.0	0.0	0.0	1.1	(0.3)
<b>Operating Cash Flow</b>	<b>(10.5)</b>	<b>(7.1)</b>	<b>(12.4)</b>	<b>(7.8)</b>	<b>1.7</b>
Capex	(20.0)	(10.0)	(5.0)	(6.0)	(12.1)
Other investments	0.0	0.0	0.0	0.0	0.0
<b>Investing Cash Flow</b>	<b>(20.0)</b>	<b>(10.0)</b>	<b>(5.0)</b>	<b>(6.0)</b>	<b>(12.1)</b>
Net interest received / (paid)	0.0	0.6	0.6	(0.4)	(1.2)
Debt draw down / (repayment)	0.0	0.0	0.0	10.0	5.0
Dividends paid	0.0	0.0	0.0	0.0	(0.3)
Equity raised / (repaid)	40.3	17.0	0.0	0.0	0.0
<b>Financing Cash Flow</b>	<b>40.3</b>	<b>17.6</b>	<b>0.6</b>	<b>9.6</b>	<b>3.4</b>
Royalties & Other	3.5	(1.0)	5.0	5.0	0.0
<b>Inc/(Dec) in Cash</b>	<b>13.3</b>	<b>(0.5)</b>	<b>(11.8)</b>	<b>0.9</b>	<b>(7.0)</b>

Balance Sheet (A\$M)	FY18A	FY19E	FY20E	FY21E	FY22E
Cash & Equivalents	22.0	21.4	9.6	10.5	3.5
Receivables	8.2	1.0	1.0	2.2	7.2
Inventories	0.0	0.0	0.3	0.7	2.3
Other Current Assets	0.3	0.3	0.3	0.3	0.3
PPE	16.1	25.6	30.1	35.6	47.2
Deferred tax asset	0.0	0.0	0.0	0.0	0.0
Other Non Current Assets	0.0	0.0	0.0	0.0	0.0
<b>Total Assets</b>	<b>46.5</b>	<b>48.3</b>	<b>41.3</b>	<b>49.2</b>	<b>60.4</b>
Payables and other current Liabilities	2.8	2.6	2.6	3.0	8.9
Short Term Debt	0.0	0.0	0.0	0.0	0.0
Long Term Debt	0.0	0.0	0.0	10.0	15.0
Other Non Current Liabilities	0.0	0.0	0.0	0.0	0.0
<b>Total Liabilities</b>	<b>2.9</b>	<b>2.6</b>	<b>2.6</b>	<b>13.0</b>	<b>23.9</b>
<b>Total Equity</b>	<b>43.6</b>	<b>45.7</b>	<b>38.7</b>	<b>36.2</b>	<b>36.5</b>
Net Cash/(Debt)	22.0	21.4	9.6	0.5	(11.5)

Substantial Shareholders	%	Date
HSBC Custody Nominees	11.9	
Mark Joseph Pivac	8.1	Oct-18
Wisconsin Holdings Pty Ltd	2.5	

Source: Company, IRESS, State One Stockbroking forecasts

Hadrian X revenue f'cast (A\$M)	FY18A	FY19E	FY20E	FY21E	FY22E
No. of Hadrian X's operating	na	1	2	3	10
No of houses built	na	0	150	345	1150
m <sup>2</sup> built (@ 225m <sup>2</sup> av per house)	na	0	33,750	77,625	258,750
Revenue (US\$m) (@ US\$100/m <sup>2</sup> )	na	0	3	8	26
AUD:USD exchange rate	na	0.70	0.70	0.70	0.70
Revenue (A\$m)	na	0	5	11	38



Leverage	FY18A	FY19E	FY20E	FY21E	FY22E
Net Debt/Equity	cash	cash	cash	cash	-32%
Gearing (ND/ND+E)	cash	cash	cash	cash	-19%
Interest Cover (x)	na	na	na	-9.1	1.8

Valuation Ratios (x)	FY18A	FY19E	FY20E	FY21E	FY22E
Normalised P/E	na	na	na	na	202.3
Price/OP Cash Flow	na	na	na	na	na
Book value per share (A\$)	2.7	2.6	2.2	2.0	2.0
EV/EBITDA	na	na	na	na	na
ROE (%)	-16%	-33%	-18%	-7%	2%

SOTP valuation	A\$m	A\$ps
Hadrian X NPV (unrisked)	508	0.28
<i>Risk weighting (timing, volumes, pricing, etc)</i>	<b>50%</b>	
Hadrian X NPV (risked)	254	0.14
Technology upside (10% of Hadrian X NPV)	25	0.01
Enterprise value	280	0.16
Net cash / (debt) (FY18E)	21	0.01
<b>Equity value</b>	<b>301</b>	<b>0.17</b>

Current share price	0.077
% upside / (downside)	119%

## FBR Board of Directors (Source: Company)

### Board of Directors



**Richard Grellman**  
NON-EXECUTIVE CHAIRMAN

Richard Grellman AM is a highly experienced leader and a member of the Order of Australia for service to the community and to the finance and insurance sectors. Richard is currently the Non-Executive Chairman of IPH Limited, Director and Chairman of the Audit Committee of Bisalloy Steel Group Limited and a Director of the National Health and Medical Research Council Institute for Dementia Research. Since 2014, Richard has served as the Tribunal of the NSW Statutory and Other Officers Remuneration Tribunal (SOORT), appointed by the Governor of NSW. He spent 32 years with accounting firm KPMG, where he was a partner from 1982 to 2000, a member of KPMG's National Board from 1995 to 1997 and National Executive from 1997 to 2000, and has since served on a number of other Boards of both listed and unlisted organisations.



**Mike Pivac**  
MANAGING DIRECTOR & CHIEF EXECUTIVE OFFICER

Mike Pivac spent 20 years in the Aviation sector as an Airborne Mission Coordinator with Australian Border Protection and Search and Rescue, specializing in Electronic Detection Systems and strategic and tactical mission planning, working closely with Australian and International Government and Military Agencies. He has also owned and operated Businesses in the Retail, Hospitality and Transport sectors and has been key to developing FBR's technology, business plan and machine development strategy. He has forged relationships with investors, builders, product suppliers and future customers pivotal to bringing the Hadrian X to life.



**Mark Pivac**  
EXECUTIVE DIRECTOR & CHIEF TECHNICAL OFFICER

Mark Pivac is the primary inventor of FBR's automated bricklaying technology. He is an aeronautical and mechanical engineer with over 25 years' experience working on the development of high technology equipment ranging from lightweight aircraft to heavy off-road equipment. He has 20 years' experience working with 3D CAD software as well as high-level mathematics, including matrix mathematics, robot transformations and vector mathematics for machine motion. Mark has also worked extensively with design, commissioning and fault finding on servo-controlled motion systems achieving very high dynamic performance.



**Nancy Milne OAM**  
NON-EXECUTIVE DIRECTOR

Nancy Milne has extensive business experience as a non-executive director and lawyer specialising in insurance, corporate governance, risk management and commercial dispute resolution. She was a partner at Clayton Utz from 1997 to 2003 and a consultant until 2012, and was awarded the Order of Australia Medal in 2008 for services to the legal sector and to the community. Nancy is currently a Non-Executive Director of ALE Property Group Limited, Chair of the Securities Exchanges Guarantee Corporation and Deputy Chair of the State Insurance Regulatory Authority, and has significant experience in risk management, safety, compliance and property development. Nancy was previously a Director of Australand Property Group and Novion Property Group. In addition to her role as Non-Executive Director, Nancy is Chair of FBR'S Remuneration Committee.



**Andrew Bloore**  
NON-EXECUTIVE DIRECTOR

Andrew Bloore is highly experienced in design and delivery of disruptive technologies and distribution models. He has a strong strategy and profitability focus and has been involved in a number of corporate transactions across his career. Andrew has spent over 25 years in the superannuation sector and was the CEO and Founder of SuperIQ Pty Ltd, an automated online administrator of self management super funds. Andrew is currently the Chairman of Guildlink Ltd and is a director of Guild Group, Noahface Pty Ltd, the Sydney Institute of Marine Science Foundation and Vertical Farming Australia Pty Ltd. He also sits on the Commercialisation Board of Landcare NSW and is a Lead Mentor for Stone & Chalk, a fintech startup hub.

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Alan Hill  
Executive Chairman  
Phone: +61 8 9288 3388  
[ahill@stateone.com.au](mailto:ahill@stateone.com.au)

Ric Heydon  
Equities & Derivatives Advisor  
Phone: +61 8 9288 3307  
[rheydon@stateone.com.au](mailto:rheydon@stateone.com.au)

Mark Sullivan  
Institutional Dealer  
Phone: +61 2 9024 9134  
[msullivan@stateone.com.au](mailto:msullivan@stateone.com.au)

Thomas Tan  
Equities Advisor  
Phone: +61 2 9024 9131  
[ttan@stateone.com.au](mailto:ttan@stateone.com.au)

Morris Levitzke  
Equities Advisor  
Phone: +61 8 9288 3315  
[mlevitzke@stateone.com.au](mailto:mlevitzke@stateone.com.au)

Graeme Johnson  
Equities & Derivatives Advisor  
Phone: +61 8 9288 3316  
[gjohnson@stateone.com.au](mailto:gjohnson@stateone.com.au)

Yitz Barber  
Equities Advisor  
Phone: +61 2 9024 9107  
[ybarber@stateone.com.au](mailto:ybarber@stateone.com.au)

Tammie Wong  
Equities Advisor  
Phone: +61 2 9024 9133  
[twong@stateone.com.au](mailto:twong@stateone.com.au)

Dawn Chia  
Business Development Manager  
Phone: +61 8 9288 3336  
[Dawn.Chia@stateone.com.au](mailto:Dawn.Chia@stateone.com.au)

David Zhang  
Equities Advisor  
Phone: +61 2 9024 9130  
[dzhang@stateone.com.au](mailto:dzhang@stateone.com.au)

David Brennan  
Senior Investment Analyst  
Phone: +61 2 9024 9142  
[dbrennan@stateone.com.au](mailto:dbrennan@stateone.com.au)

Wayne Osterberg  
Equities Advisor  
Phone: +61 8 9288 3318  
[Wayne.Osterberg@stateone.com.au](mailto:Wayne.Osterberg@stateone.com.au)