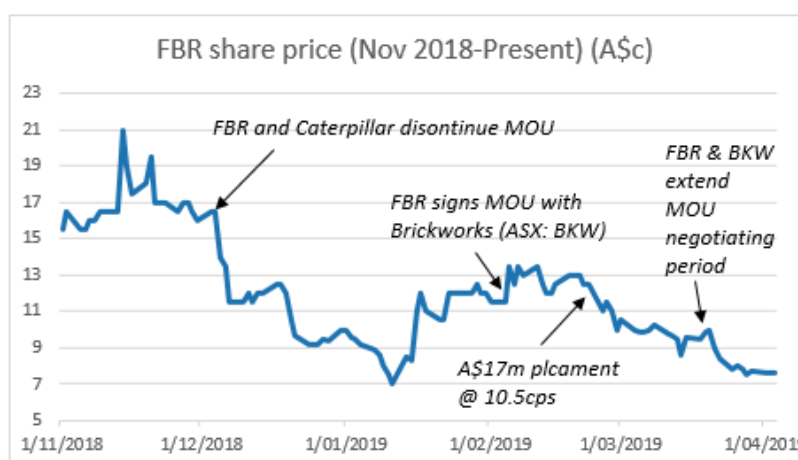


# FBR Limited (ASX:FBR)

## Value but at increased business risk

In December 2018, FBR discontinued its (July 2017) MOU with global construction and mining equipment giant Caterpillar Inc. (NYSE:CAT); the MOU looked to create a framework for collaboration regarding the development, manufacture, sales and servicing of FBR's robotic bricklaying technology, and how best to offer this technology to CAT's construction customers. We suggest that abandoning this commercialisation route - technology royalties from a tier-1 global heavy equipment manufacturer - in favour of a Wall as a Service™ (WaaS™) business model, has not, as yet, fully gained traction with the marketplace. At current price levels of 8c, FBR's share price is 52% below its December high of 16.5c.



The WaaS™ business model involves FBR effectively becoming a subcontractor to builders i.e., generating revenue from laying bricks. This contrasts with the original commercial model of generating revenue from CAT selling Hadrian X units to building contractors and FBR receiving a royalty on the sale of each unit. FBR maintains that the WaaS™ business model potentially makes a stronger financial return than machine sales. However, it also, increases the business and financial risk for FBR. FBR will now have to finance manufacturing the Hadrian X units, fund the working capital to maintain the machines, train and employ operators, and most critically of all, source building work and learn how to operate in the domestic (and potentially overseas) building and construction industry. This, we imagine, will be a steep learning curve for what is effectively an IT/engineering company.

### Risked SOTP target price: A\$0.17 (A\$0.50 previously)

We have significantly revised down our forecast revenue and profit profiles on the back of FBR's new operator-driven versus royalty-driven business model. This is essentially due to (1) forecast capex constraints on ramping-up the manufacture of Hadrian X units, (2) lags in "on-boarding" building and construction contracts and, (3) limiting work initially to Australia. As a result, our un-risked NPV<sub>10</sub> for the Hadrian X Project has fallen considerably to A\$495m (28c per fully diluted share) from A\$1,043m (66c per diluted share). In addition, we have increased our risk discount to 50% (30% previously) on the increased forecast risk attached to the new commercial model. As a result, our target price has fallen to 17c (50c previously). We maintain a Speculative Buy (Higher Risk) recommendation. Risks to our earnings profile and target price include, but are not limited to: sourcing building contracts, operational performance of Hadrian X, operating costs and capex, dependence upon key personnel, competition from other technologies.

5 April 2019

Share Price: A\$0.08

Target Price: A\$0.17

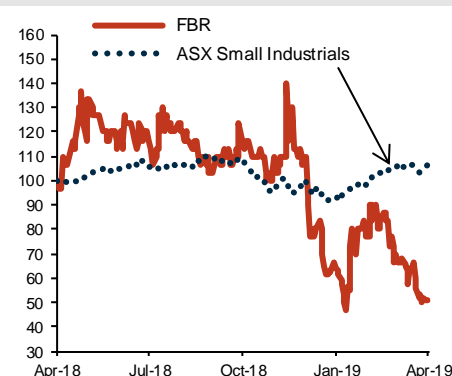
**Targeted Upside: 111%**
**Recommendation**  
**Speculative Buy**
**Risk Assessment**  
**Higher**
**Construction Machinery/Technology**

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### FBR Limited

ASX Code	FBR
52-week range (A\$cps)	A\$0.07-A\$0.22
Fully diluted Market Cap (A\$m)	143
Fully diluted no. of shares (m)	1,785
Av Daily Turnover (shares)	3.9 million
ASX All Ordinaries	6,276
FY19E BV per share (A\$c)	2.9c
FY19E EPS (A\$c)	-0.5c
FY19E Net (Debt)/Cash (A\$m)	29.4

### Relative price performance Source: IRESS



## Financial Statements

### FBR Limited

Year ending June

Profit & Loss Statement (A\$m)	FY18A	FY19E	FY20E	FY21E	FY22E
Revenue	0.5	0.0	4.5	10.4	35.2
Operating	0.0	0.0	(2.7)	(6.2)	(21.1)
R&D/Other	(4.0)	(5.5)	(5.6)	(5.7)	(5.8)
Employee/Directors	(1.6)	(2.5)	(2.6)	(2.6)	(2.7)
<b>EBITDA</b>	<b>(5.1)</b>	<b>(8.0)</b>	<b>(6.4)</b>	<b>(4.2)</b>	<b>5.6</b>
Depreciation & Amortisation	(0.0)	(0.5)	(0.5)	(0.5)	(0.5)
<b>Operating profit</b>	<b>(5.1)</b>	<b>(8.5)</b>	<b>(6.9)</b>	<b>(4.7)</b>	<b>5.1</b>
Royalties & Other	(2.0)	(1.0)	0.0	0.0	0.0
<b>EBIT</b>	<b>(7.1)</b>	<b>(9.5)</b>	<b>(6.9)</b>	<b>(4.7)</b>	<b>5.1</b>
Interest income	0.0	0.6	0.8	0.5	0.2
Interest expense	0.0	0.0	0.0	0.0	(0.3)
Tax expense	0.0	0.0	0.0	1.3	(2)
<b>Reported NPAT</b>	<b>(7.1)</b>	<b>(8.9)</b>	<b>(6.1)</b>	<b>(2.9)</b>	<b>3.5</b>
<b>Normalised NPAT</b>	<b>(7.1)</b>	<b>(8.9)</b>	<b>(6.1)</b>	<b>(2.9)</b>	<b>3.5</b>
EBITDA Margin (%)	na	na	-141%	-40%	16%
Operating profit margin (%)	na	na	-152%	-45%	14%
EPS Reported - Diluted (A\$c)	(0.4)	(0.5)	(0.3)	(0.2)	0.2
<b>EPS Normalised - Diluted (A\$c)</b>	<b>(0.4)</b>	<b>(0.5)</b>	<b>(0.3)</b>	<b>(0.2)</b>	<b>0.2</b>
EPS growth (%)	nm	nm	nm	nm	n/a
DPS - Declared (A\$c)	0.0	0.0	0.0	0.0	0.1
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

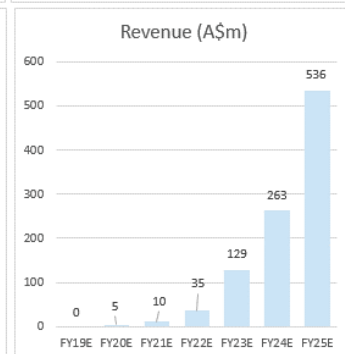
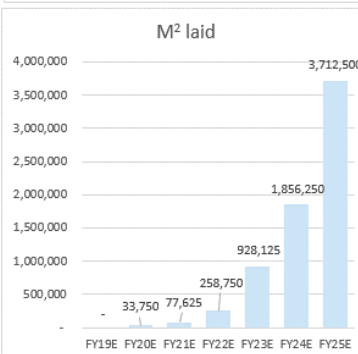
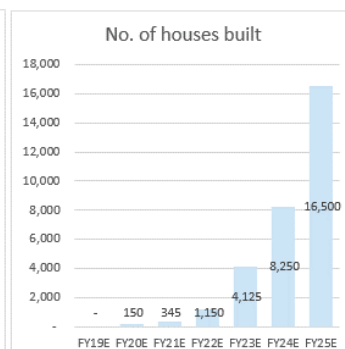
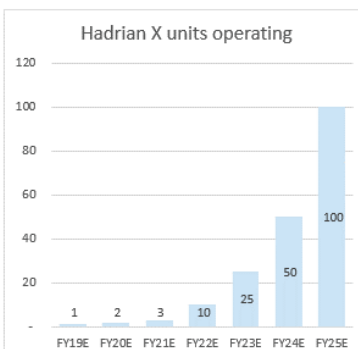
Cash Flow Statement (A\$m)	FY18A	FY19E	FY20E	FY21E	FY22E
EBITDA	(5.1)	(8.0)	(6.4)	(4.2)	5.6
Investment in working capital	(5.4)	6.9	(0.2)	(1.2)	(0.6)
Tax expense	0.0	0.0	0.0	1.3	(1.5)
<b>Operating Cash Flow</b>	<b>(10.5)</b>	<b>(1.1)</b>	<b>(6.6)</b>	<b>(4.1)</b>	<b>3.4</b>
Capex	(20.0)	(8.0)	(5.0)	(6.0)	(12.1)
Other investments	0.0	0.0	0.0	0.0	0.0
<b>Investing Cash Flow</b>	<b>(20.0)</b>	<b>(8.0)</b>	<b>(5.0)</b>	<b>(6.0)</b>	<b>(12.1)</b>
Net interest received / (paid)	0.0	0.6	0.8	0.5	(0.1)
Debt draw down / (repayment)	0.0	0.0	0.0	0.0	5.0
Dividends paid	0.0	0.0	0.0	0.0	(1.8)
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>0.8</b>	<b>0.5</b>	<b>3.2</b>
Royalties & Other	3.5	(1.0)	0.0	0.0	0.0
<b>Inc/(Dec) in Cash</b>	<b>13.3</b>	<b>7.5</b>	<b>(10.8)</b>	<b>(9.6)</b>	<b>(5.5)</b>

Balance Sheet (A\$m)	FY18A	FY19E	FY20E	FY21E	FY22E
Cash & Equivalents	22.0	29.4	18.6	9.0	3.4
Receivables	8.2	1.0	0.9	2.1	6.7
Inventories	0.0	0.0	0.3	0.6	2.1
Other Current Assets	0.3	0.3	0.3	0.3	0.3
PPE	16.1	23.6	28.1	33.6	45.2
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>54.3</b>	<b>48.2</b>	<b>45.5</b>	<b>57.7</b>
Payables and other current Liabilities	2.8	2.6	2.6	2.8	8.3
Short Term Debt	0.0	0.0	0.0	0.0	5.0
Long Term Debt	0.0	0.0	0.0	0.0	0.0
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>2.9</b>	<b>13.3</b>
<b>Total Equity</b>	<b>43.6</b>	<b>51.7</b>	<b>45.6</b>	<b>42.6</b>	<b>44.4</b>
Net Cash/(Debt)	22.0	29.4	18.6	9.0	(1.6)

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	0.75	0.75	0.75	0.75
Revenue (A\$m)	na	0	5	10	35



Leverage	FY18A	FY19E	FY20E	FY21E	FY22E
Net Debt/Equity	cash	cash	cash	cash	-4%
Gearing (ND/ND+E)	cash	cash	cash	cash	-3%
Interest Cover (x)	na	na	na	na	76.2

Valuation Ratios (x)	FY18A	FY19E	FY20E	FY21E	FY22E
Normalised P/E	na	na	na	na	40.6
Price/OP Cash Flow	na	na	na	na	na
Book value per share (A\$c)	2.7	2.9	2.6	2.4	2.5
EV/EBITDA	na	na	na	na	na
ROE (%)	-16%	-17%	-13%	-7%	8%

SOTP valuation	A\$m	A\$ps
Hadrian X NPV (unrisked)	495	0.28
<i>Risk weighting (timing, volumes, pricing, etc)</i>	50%	
Hadrian X NPV (risked)	247	0.14
Technology upside (10% of Hadrian X NPV)	25	0.01
Enterprise value	272	0.15
Net cash / (debt) (FY18E)	29	0.02
<b>Equity value</b>	<b>302</b>	<b>0.17</b>

Current share price	0.080
% upside / (downside)	111%

## 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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