BELL POTTER

Speculative
See Key Risks on Page 13 & Biotechnology Risk Warning on Page 15
Speculative securities may not be suitable for Retail clients

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Pharmaxis Ltd. (PXS)

Down but not out, with turnaround prospects strong in CY20

Recommendation
Buy (unchanged)
Price
$0.115
Valuation
$0.26 (previously $0.59)
Risk
Speculative

GICS Sector
Pharmaceuticals & Biotechnology

Expected Return	
Capital growth	**126.1%**
Dividend yield	**0.0%**
Total expected return	**126.1%**
Company Data & Ratios	
Enterprise value	**$28.5m**
Market cap	**$45.4m**
Issued capital	**394.7m**
Free float	**98.7%**
Avg. daily val. (52wk)	**$65,775**
12 month price range	**$0.115- $0.305**

Price Performance

	(1m)	(3m)	(12m)
Price (A$)	0.20	0.20	0.25
Absolute (%)	15.38	12.50	-10.00
Rel market (%)	14.59	8.72	-27.93

Absolute Price

SOURCE: IRESS

Key highlights from 1H20 unaudited results

Aridol and Bronchitol sales for 1H20 were in-line with our forecasts, with variance in overall revenue driven by an upfront in BPe from a potential LOXL-2 deal, timing for which has moved to 2H20. Overall 1H20 product sales grew ~46% over pcp, with material increase in Bronchitol sales (driven by Russia and Western EU) offset by lower Aridol sales (no order from US). We expect this segment to become profitable from FY21. Opex was ~9% lower than BPe, due to timing with some clinical and drug development costs moving to 2H20. Cash of $25.9m, provide ~13 months runway ahead of boost expected through licensing deal for LOXL-2 and milestone from Chiesi.

Turnaround prospects strong in CY20

PXS had a disappointing set back in 4QCY19, causing a sharp fall in its stock price, when partner Boehringer Ingelheim discontinued development of drug BI_1467335 for NASH, despite positive Phase 2A results. We believe at current prices PXS represents a compelling 'Spec Buy' given its strong turnaround prospects. Key inflexion points to drive this turnaround include: a) Commercial assessment and results from phase 2A Diabetic Retinopathy trial with BI_1467335 partnered with BI are expected in 2HCY20; b) LOXL-2 asset has successfully completed Phase 1 trials, as well as added to the data package with further supporting studies in 4QCY19. This has re-energised the ongoing partnering process, with a conclusion now expected by mid-CY20; and c) Also by mid-CY20 we expect FDA approval decision on bronchitol, which is expected to be followed by a US$10m milestone from PXS' partner Chiesi in 3QCY20.

Valuation reduced to $0.26, Retain Buy (speculative)

We have trimmed our opex and interest income forecasts and increased depreciation forecasts for FY20-FY22. The impact of these changes to our FY20-FY22 NPAT/Net loss forecasts in absolute terms was not material (less than 200k). The long term impact of removing revenues for BI_1467335 for NASH from our model, moving deal timing of LOXL-2 to 2HFY20 (was 1HFY20) and increasing our WACC to 17% (was 16%), partially offset by adjusting our DCF model for time creep, has led to a significant decrease in our valuation for PXS to A$0.26/sh (was A$0.59/sh).

Earnings Forecast

Year end 30th June	2018A	2019A	2020E	2021E	2022E
Revenue (A$m)	50.2	12.2	20.5	32.7	16.3
EBITDA (A$m)	11.5	-15.7	-4.0	5.2	-7.1
NPAT (reported) (A$m)	6.4	-20.1	-9.2	0.8	-11.5
NPAT (normalised) (A$m)	7.6	-19.0	-8.1	2.1	-10.1
EPS (reported) (cps)	2.0	-5.1	-2.3	0.2	-2.9
EPS (adjusted) (cps)	2.4	-4.8	-2.0	0.5	-2.6
EPS growth (%)	NM	N/A	N/A	NM	N/A
PER (x)	4.8	N/A	N/A	21.9	N/A
EV/EBITDA (x)	2.5	-1.8	-7.2	5.5	-4.0
Dividend (¢ps)	0.0	0.0	0.0	0.0	0.0
Yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%
Franking (%)	N/A	N/A	N/A	N/A	N/A
ROE (%)	68.5%	NM	NM	23.5%	NM

NOTE: REVENUE INCLUDES R&D TAX INCENTIVE, MILESTONES FROM BI DEAL AND CHIESI DEAL AND FY20/21 REVENUE INCLUDES RISK ADJUSTED UPFRONT AND MILESTONES FROM LICENSING DEAL FOR LOXL-2. SOURCE: BELL POTTER SECURITIES ESTIMATES

DISCLAIMER: THIS REPORT MUST BE READ WITH THE DISCLAIMER ON PAGE 15 THAT FORMS PART OF IT.
DISCLOSURE: BELL POTTER SECURITIES ACTED AS JOINT LEAD MANAGER FOR THE $24M PLACEMENT IN AUGUST 2018 AND RECEIVED FEES FOR THAT SERVICE.

1H20 – Result Summary

A summary of the reported 1H20 result based on unaudited income statement summary as per PXS' quarterly update is shown in the Table below:

Table 1 – 1H20 result summary

	Result vs PCP			Result vs Forecast		Comments
	1H19A	1H20A	% change	1H19E	Variance (%)	
Revenues	**2.5**	**3.8**	**52%**	**16.8**	**-77%**	Revenue lower than our forecast since we had an upfront of $13m from a LOXL-2 deal in our estimates timing for which has moved to 2HFY20
Total operating costs	**12.3**	**11.8**	**-4%**	**12.9**	**-9%**	Opex 9% lower than our forecast driven primarily by lower clinical trials and drug development cost on PXS' pipeline assets (timing related) and lower rent & other utilities
EBITDA	**-9.8**	**-8.0**	**-18%**	**3.9**	**-307%**	**EBITDA loss vs. our profit forecast driven by lower revenue partially offset by lower opex**
Depreciation and Amortisation	-1.3	-1.6	25%	-1.5	5%	Depreciation expense modestly higher than our forecast
EBIT	**-11.1**	**-9.6**	-13%	**2.3**	**-513%**	**EBIT loss with variance increased from EBITDA line due to higher D&A**
Net Interest Income/(expense)	0.2	-0.1	NM	0.0	NM	Lower Interest income
Other Income/(expense)	-1.0	-0.1	91%	-1.0	-91%	Lower Fx loss of $0.1m, due to a $0.8m Fx gain in 2Q, offsetting 1Q loss
Pretax Income (Loss)	-11.9	-9.8	-18%	1.3	NM	
Net Income (Loss) after tax - normalised	**-11.9**	**-9.8**	**-18%**	**1.3**	**NM**	**Net loss vs. profit**
Diluted EPS/Share (cents)	-3.18	-2.48	-22%	0.33	NM	
One off items	-0.66	-0.54	-18%	-0.59	-9%	Lower share based compensation expense
Reported Net Income (loss)	**-12.6**	**-10.3**	**-18%**	**0.7**	**NM**	Reported Net loss vs. profit. Includes share based compensation of $0.54m
Reported Diluted EPS/sh (cents)	-3.36	-2.62	-22%	0.18	NM	

NOTE: 1H20A EPS/SHARE NUMBERS ARE ESTIMATES SUBJECT TO CHANGES WHEN COMPANY FILES ITS AUDITED FINANCIALS LATER IN FEB'20.

SOURCE: COMPANY DATA AND BELL POTTER SECURITIES ESTIMATES

The key highlights from the result were:

- **Revenue lower than forecast:** Total revenue of $3.8m (up 52% y/y) was lower than our forecast of $16.8m, since we had an upfront of $13m from a potential LOXL-2 deal in 1HFY20, timing for which has moved to 2HFY20. Bronchitol and Aridol sales were in-line with our forecasts, as was other income (which included a $0.3m higher R&D tax rebate received for FY19). The significant increase in revenues over pcp was driven by significantly higher Bronchitol and Aridol product sales and the R&D tax rebate of $0.3m (vs. none in pcp).

  Overall Bronchitol and Aridol product sales of $3.3m in 1HFY20 grew ~46% over pcp, with significant increase in bronchitol sales (+230% y/y) driven by orders from Chiesi for Western Europe and orders from Russia (vs. none in pcp for both these markets), which was partially offset by lower Aridol sales (-31% y/y) driven by no order for US from Metapharm in 1H20 (vs. pcp which had a significant launch order for US for Aridol). In 2Q20 PXS delivered a small launch order for Canada to Metapharm (~72k). We don't expect an order for Aridol either from US or Canada in 2H20 and therefore expect Aridol sales for FY20 will also be lower than FY19. We expect 2H20 to also be strong for Bronchitol with further orders from both Western Europe and Russia expected, which should see FY20 Bronchitol sales being materially higher over pcp.

- **Operating expenses were 9% lower than expected:** Total opex of $11.8m (down 4% y/y) were 9% lower than our forecast of $12.9m. This was driven primarily by lower drug development and clinical trial costs related to the LOX systemic and topical programs and an unexpected credit back from the CRO who previously ran the US bronchitol trial as well as lower rent, occupancy and utilities cost. We believe the lower clinical trial and drug development expenses in the half are timing related, with some costs having moved to 2HFY20. Therefore we have not made any changes to our overall FY20 clinical trial and drug development cost forecasts. The decrease over pcp was driven by lower drug development and lower rent, occupancy and utilities costs.

- **EBITDA loss vs. our profit forecast:** EBITDA loss of $8.0m (down 18% y/y) vs. our EBITDA profit forecast for 1HFY20 was driven by lower revenue (due to deal timing for

LOXL-2 shifting to 2H20), partially offset by lower opex. The lower EBITDA loss vs. pcp was driven by both higher revenue and lower opex.

- **Underlying and Reported Net loss vs. our profit forecast:** Underlying Net loss of $9.8m (down 18% y/y) vs. our Net profit forecast was primarily driven by lower revenue. The variance at the Net loss line was modestly lower than the EBITDA loss line due to lower Fx loss than our forecasts, partially offset by lower interest income and higher D&A expense. Reported Net loss was $10.3m (including $0.54m share based compensation expense).
- **Strong cash position:** PXS ended 1HFY20 with cash reserves of A$25.9m, having been bolstered by a $6.2m R&D tax rebate received in 2QFY20. This should provide PXS with ~13 months cash runway. US$10m Milestone from Chiesi on US approval of Bronchitol and upfront from a potential LOXL-2 deal expected within the next 9 months should further extend this cash runway.

  We also note that PXS has not booked an estimated $1.4m R&D tax rebate for 1HFY20 in anticipation that a LOXL-2 deal could push them over the revenue cap for the rebate. Should the timing of the LOXL-2 deal slip further, then PXS could potentially get ~$2.8m in R&D tax rebate for FY20. At this stage we have also assumed a deal for LOXL-2 happens in FY20 and therefore do not have R&D tax rebate in our forecasts for FY20.

BI discontinues development of partnered drug for NASH

In late 4QCY19, PXS announced that its partner Boehringer Ingelheim (BI) had decided to discontinue developing the Phase 2 SSAO/VAP-1 inhibitor BI_1467335 drug for NASH, despite positive Phase 2A results. BI which acquired this drug from PXS in 2015, still continues to develop the drug in question for another indication Diabetic Retinopathy (DR). A Phase 2A trial is ongoing in DR, which is due to report in 3QCY20.

Key highlights

- The decision to discontinue development for NASH was based on a Phase 1 study in healthy volunteers which highlighted the risk of drug interactions of the compound in NASH patients.
- **BI advised to PXS that the Phase 2A results were positive and had it not been for the drug interaction issue they would have continued further development of the drug for NASH.**
- The Phase 2A trial was a multicentre, double blinded study which recruited 114 patients with clinical evidence of NASH across Europe and North America. It was a dose finding study which randomised patients to 4 different doses of the BI_1467335 drug and placebo over a 12 week (3 months) treatment period.
- **PXS management advised that the Phase 2A trial was successful** showing that the treatment was well tolerated, with no drug related serious adverse events (SAE). It also met the trials pre-specified target for inhibiting the AOC3 enzyme (associated with inflammation in NASH) which the drug targets. It also showed a nice dose related effect on secondary efficacy endpoints (liver enzymes) and clinically relevant NASH biomarkers.
- Apart from the phase 2A study BI also conducted ~8 additional Phase 1 studies. We understand that one of these Phase 1 studies (small of ~10 healthy volunteers), was testing the drug interaction that the compound may have with an enzyme called MAO-B (Monoamine oxidase B) in the brain. BI completed the study in Nov'2019 and the study showed a high interaction of the drug with MAO-B in the brain of the healthy volunteers at specific doses. We understand that the doses at which they saw the interaction overlapped with the high doses in the Phase 2A trial which had shown efficacy.
- The drug interaction was of concern to BI since there are currently MAO-B inhibitors approved in the market to treat motor symptoms of Parkinsons disease. MAO-B inhibitors are known to interact negatively with anti-depressants (specifically selective serotonin reuptake inhibitors or SSRIs), which can result in increased serotonergic effects, leading to serotonin syndrome. Serotonin syndrome is a measure of central nervous system (CNS) hyperexcitability in relation to an excess of serotonin. In rare cases serotonin syndrome can cause hyperthermia and be life-threatening.
- NASH is a large unmet need, with currently no approved drugs. BI we understand looked at the NASH population who may concurrently also be on anti-depressants. They also considered the fact that if approved the NASH drug is likely to be prescribed by GP's rather than specialists. We understand that BI potentially thought that a restrictive labelling may not be sufficient to resolve the risk of use of the drug in patients on SSRI's to their satisfaction and therefore the potential risk of drug interactions. We also understand that they had discussions with the FDA and after considering all things including a potential Phase 3 design, the Phase 2A results and the Phase 1 results decided to discontinue developing the drug for NASH.

Impact on PXS from BI's decision

- BI still continues to develop the drug for a second indication Diabetic Retinopathy. Should BI continue to proceed with further development for DR, PXS stands to receive €177m in Phase 3 initiation, filing and approval milestones. Commercial milestones on reaching sales thresholds and royalties on net sales post approval are also part of the deal as it currently stands.
- Phase 2A DR trial completed recruitment in Nov'19, with the trial expected to complete in May'20. Commercial assessment and results from this trial from BI are due in 3QCY20.
- PXS and BI believe that the drug interaction issue with MAO-B seen with the compound in the brain is dose related. In the ongoing trial they are just exploring one dose (which we understand is a lower dose than that used in NASH). BI believes the data from the trial is required for them to assess the risk-benefit profile of the drug in Diabetic Retinopathy. To them the possibility of the drug still moving forward in DR still exists. Also, given that DR in diabetics' leads to blindness, the risk reward equation in general in DR is likely to be different than it was for NASH. We also note that the cost of developing the drug further for DR is also likely to be lower than developing it for NASH. PXS also mentioned that the AOC# enzyme in the eye was also pathophysiologically different in the eye than it is in the liver and BI has done a lot of pre-clinical work in the eye since they acquired the drug from PXS to give them reason to not write off the drug in DR till they see the results from the Phase 2A trial.
- BI can also choose to develop the drug for other indications if it wants to. BI has invested a lot of money in the program in running clinical trials (8 Phase 1 studies, 1 Phase 2A trial in NASH and 1 Phase 2A trial in DR) and also to date paid €57m (A$83m) in upfronts and milestones to PXS. Hence, the decision to discontinue all further development of the drug for any indication is likely to not be taken without careful considerations of all parameters in our view.
- We note that until BI completely stops all development of the drug, it will not be handed over to PXS. PXS therefore cannot pursue licensing of the drug to others.
- The decision of BI to stop developing the drug had no near term impact on PXS' cash flows or our forecasts, given that the next milestone under the deal was not due till FY23 in our view on initiation of a Phase 3 trial. BI would have had to first run a Phase 2b trial in NASH for which there was no milestone payable to PXS. The removal of this indication from our model has impacted our long term forecasts (removing milestones and potential royalties on sales).
- We also note that this interaction seen with the BI drug with MAO-B in the brain has no read throughs for PXS' LOXL-2 asset. We understand that the system circulation window for LOXL-2 is thousand folds higher than it was for the SSAO inhibitor.
- PXS is funded to next inflexion points namely partnering LOXL-2 asset and moving its Phase 1 LOX asset targeting myelofibrosis into Phase 2 trials in 2HCY20. We currently do not value the LOX asset for myelofibrosis and therefore it represents an upside to our current valuation for PXS. PXS intends to apply for orphan drug status and obtain feedback on potential Phase 2 design in its pre-IND meeting with the FDA.
- The myelofibrosis market is estimated to be >US$1bn and PXS believes its mechanism of action will differentiate it from the current approved drug Jakafi. It also believes that on a PD basis while early, there should be no drug interactions between the two, therefore giving rise to the possibility of PXS' drug being also explored as a potential combination therapy with Jakafi for myelofibrosis.

Earnings and Valuation Changes

We have reviewed our assumptions for PXS and made adjustments to our forecasts based on its quarterly update filed on the ASX, which have impacted earnings and valuation.

Key changes to our modelling assumptions

- We have removed ~$0.3m of an R&D tax rebate we had earlier booked in 2HFY20. This has not had a material impact on our FY20 revenue forecasts. PXS has not booked an estimated R&D tax rebate of $1.4m for 1H assuming that a LOXL-2 deal in FY20 will put them above the ervenue cap. However if the deal does not occur in FY20, PXS could potentially book ~$2.8m in R&D tax rebate for FY20. We also do not include this est. R&D tax rebate in our FY20 forecasts.
- We have made modest reductions in our opex forecasts for FY20-22 to account for the lower than expected rent, occupancy and utilities cost in 1H20.
- We have removed revenues for the PXS/Boehringer Ingelheim (BI) drug BI_1467335 for the NASH indication, following BI's decision to not pursue development of the drug for NASH. This has reduced our revenue forecasts from FY23 onwards in which year we had expected the next milestone from BI.
- Boehringer Ingelheim (BI) is still pursuing development of the drug BI_1467335 for Diabetic Retinopathy (DR). A Phase 2A trial in DR is currently ongoing. Recruitment has been completed in the trial and results from the trial along with the decision by BI whether to pursue further development of the drug for DR are expected in 2HCY20 (potentially late 3QCY20/early 4QCY20). DR has now become the first indication as per the deal agreement for the drug and hence has a higher upfront due on Phase 3 completion and a lower overall development, filing and approval milestones than we previously forecast for it (i.e. when we had treated it as the second indication). We have revised our milestone assumptions accordingly. The next milestone from the partnership for DR of €37m on start of Phase 3 trials (should BI continue to develop it and move it into Phase 2b trials first) is not expected till FY24.
- We now assume that a deal for LOXL-2 asset gets finalised in 1HCY20 (vs. 2HCY19). Accordingly we have moved our assumed upfront payment from the deal to 2HFY20 (was 1HFY20). Earlier management had expected the partnering process to conclude before end of CY19. We understand negotiations are still ongoing and the CEO continued these discussions last month with interested parties at the recent JP Morgan conference as well. The parties in the discussions were those that were new and also those who have been engaged in due diligence following PXS making additional pre-clinical data available in 4QCY19 on LOXL-2's relevance in fibrotic disease and superiority of PXS' LOXL-2 compound vs. Gileads failed drug which also targeted LOXL-2. Management is no longer guiding to a timeline for conclusion of the process and we assume its likely by mid-CY20. We assume it happens before end of June'20. PXS is also running a small Phase 1 study to test the effect of food and different dosing regimens on the drugs PK profile, which will complete in 1QCY20. This will add to the existing data package.
- We have also moved the timing of some of the later milestones as the ~6 month shift in our timeline for the deal, push some of the activities that are likely to trigger these future milestones to the next financial year. Our launch timeline also moves to 2HFY29 vs. 1HFY29 and therefore we have lowered our launch year penetration and revenue estimates accordingly.
- We have increased our forward depreciation forecasts for FY20 and beyond to account for the higher than expected cost reported for 1HFY20 and higher property, plant and

Equipment (PPE). We understand there has been some adjustment made to the estimated impact of adopting the new AASB 16 leases accounting standard from 1st July 2019.

- We have reduced our interest income forward forecasts based on the lower income reported for 1HFY20.
- We have increased the WACC we use in our DCF valuation from 16% to 17% to account for the increased risk in the company's situation. The LOXL-2 deal has taken longer than previously expected and there is still risk around our assumed timing of 1HCY20 given no concrete guidance from management (it could easily slip into 2HCY20). Following BI's decision to stop developing the drug BI_1467335 for NASH, the risk around the future of the drug moving forward for Diabetic Retinopathy has also increased. Technically the decision to stop NASH was due to a safety reason (drug interactions which were however dose specific), which increases the risk around the DR indication also moving forward. However we note that we believe the results from the 2A trial would determine the drugs fate for DR (BI will likely consider unmet need, risk/reward, dose in DR vs. potential dose at which safety signals were seen etc. prior to making its decision) and hence we continue to model revenues from DR indication.
- We have updated our model with revised BPe USD/AUD and EUR/AUD currency assumptions for FY20-22.
- We have adjusted our DCF model for time creep.

We value PXS at $0.26/sh

We have trimmed our opex and interest income forecasts and modestly increased our depreciation forecasts for FY20-FY22. The impact of these changes to our FY20-FY22 NPAT/Net loss forecasts in absolute terms was not material (less than 200k). The long term impact of removing revenues for BI_1467335 for NASH from our model, moving deal timing of LOXL-2 to 2HFY20 (was 1HFY20) and increasing our WACC to 17% (was 16%), partially offset by adjusting our DCF model for time creep, has led to a significant decrease in our valuation for PXS to A$0.26/sh (was A$0.59/sh). **We retain Buy (Spec) on PXS.** The increase in WACC is to reflect risk around the potential for further timeline slippage for LOXL-2 deal and risk around BI's decision on further developing BI_1467335 for DR (due in 2HCY20), given that they have discontinued moving the same drug forward for NASH on dose related safety signals.

Table 2 - Key Changes to our FY20-22 Forecasts

	FY2020E			FY2021E			FY2022E		
	Old	New	Change (%)	Old	New	Change (%)	Old	New	Change (%)
Revenues	20.7	20.5	-1%	32.4	32.7	1%	16.3	16.3	0%
Interest Income	0.8	0.6	-31%	0.8	0.6	-30%	0.7	0.5	-30%
Operating Costs	25.0	24.5	-2%	27.8	27.5	-1%	23.7	23.4	-1%
EBITDA	-4.3	-4.0	-8%	4.6	5.2	14%	-7.4	-7.1	-5%
EBIT	-7.4	-7.2	-2%	1.5	2.0	31%	-10.5	-10.3	-2%
NPAT (adjusted)	-8.1	-8.1	-1%	1.9	2.1	9%	-10.1	-10.1	0%
Adjusted Diluted EPS	-2.1	-2.0	-1%	0.5	0.5	9%	-2.6	-2.6	0%
NPAT (reported)	-9.3	-9.2	-1%	0.6	0.8	27%	-11.5	-11.5	0%
Reported Diluted EPS	-2.4	-2.3	-1%	0.2	0.2	27%	-2.9	-2.9	0%

ALL AMOUNTS IN AUD IN MILLIONS EXCEPT EPS. SOURCE: BELL POTTER SECURITIES ESTIMATES

Our DCF valuation model is based on a WACC of 17.0% and a terminal growth rate of 1%.

Table 3 - Summary of Valuation

Forecasts	Base case
Enterprise value from DCF (AUDm)	91.5
Add: Current Cash (AUDm)	25.9
Less: Current Debt	9.0
Equity value (AUDm)	108.3
Total diluted shares (million)	414.6
Value per share (AUD)	**$0.26**
Current Share price (AUD)	$0.12
Expected Capital Growth	126.1%

SOURCE: BELL POTTER SECURITIES ESTIMATES

Table 4 - PXS Sum-of-parts DCF Valuation Summary

Asset	Probability adjusted NPV (A$m)	Value per share (A$)	% Mix	Probability of success/Risk adjustment	Current Phase
Bronchitol and Aridol	$21	**$0.05**	19.0%	Bronchitol - US (90%)	Marketed for Aridol, Marketed for Bronchitol (Ex-US and Canada)
New Drug Development	$105	**$0.25**	96.6%	BI_1467335 (DR - 23.5%), LOXL-2 (NASH -22.0%)	BI_1467335 for DR (Phase 2A) and LOXL-2 (Phase 1 complete)
Corporate/Non-Allocated	($34)	**-$0.08**	-31.2%	NA	NA
Reported Cash	$26	**$0.06**	23.9%	NA	NA
Reported Debt	($9)	**-$0.02**	-8.3%	NA	NA
Equity Value	**$108.3**	**$0.26**	**100.0%**		

SOURCE: BELL POTTER SECURITIES ESTIMATES

Table 5 – PXS- Key assumptions used in New Drug Development segment

Asset	Indication	Stage	Partnering Status	First Fiscal Year of sales (Est.)	Peak Market share	Peak Global Sales (US$m)	Probability of success
BI_1467335	Diabetic Retinopathy (DR)	Phase 2A	Boehringer Ingelheim	2028	10.0%	$813	23.5%
LOXL-2	NASH - F3/F4 fibrosis stage	Phase 1 complete	Partnering process ongoing	2029	5% (US), (3.5% ROW)	$1,448	22.0%

GLOBAL PEAK SALES ARE PRE-RISK ADJUSTMENT AND ROYALTIES. SOURCE: BELL POTTER SECURITIES ESTIMATES

Table 6 – Deal Assumptions for LOXL-2 (expected to be partnered in CY20)

Asset	Indication	Stage at Licensing	Licensee	Fiscal Year Timing of deal (Est.)	Total Deal Value in USDm (upfront plus milestones)	Upfront (USDm)	Other developmental & regulatory Milestones (USDm)	Commercial Milestones Est (USDm)	Royalty Rate (%)	PXS's share
LOXL-2	NASH and a second indication (potentially IPF)	Phase 1 complete	TBC	2020	700	50	470	180	11.0%	83.0%

NOTE: ROYALTIES ARE LIKELY TO BE TIERED. WE ASSUME A FLAT RATE FOR NOW. FOR LOXL-2 DEAL PXS AND ITS PARTNER SYNAIRGEN WILL SHARE THE DEAL VALUE IN 83:17 RATIO. SOURCE: BELL POTTER SECURITIES ESTIMATES

Upside Risk to our valuation

- **Clinical success will allow for increased probability of success:** We currently assign a 23.5% probability of success (of reaching the market) to BI_1467335, given that it's currently in a Phase 2A trial, for DR. We envisage that completion of the trial with positive results and subsequent advancement of BI_1467335 into Phase 2B trials (BPe FY21) will allow us to assign a higher probability of success and therefore will lead to material upgrades in our numbers.

  Similarly, we currently assign a 22.0% probability of success (of reaching the market) to LOXL-2 in NASH, following the successful completion of its Phase 1 trial. We envisage that subsequent advancement of LOXL-2 into Phase 2A trials following a partnering deal for it, will allow us to assign a higher POS and therefore will lead to material upgrades in our numbers.

- **Conservative assumptions for LOXL-2 to start with in absence of Phase 2 clinical data:** Our market penetration & pricing assumptions and deal size assumptions, are all based on the premise that LOXL-2 will be behind several years to other drugs targeting NASH to get to market. At that stage we expect the drug is more likely than not to be used as an add on therapy with existing standard of care by then to improve efficacy, likely in the more severe end of the fibrosis stage spectrum of NASH. However, given the scarcity of anti-fibrotic assets in development for NASH, we expect both partnering interest and deal size for the LOXL-2 asset with its novel mechanism of action (MoA) to be in line with other high value deals in this space recently. In the absence of Phase 2 clinical data from LOXL-2, we are conservative in our assumptions at this stage including our assumptions for the deal size.

- **We do not model royalty revenue from a second indication (likely IPF) for LOXL-2 presently:** At this stage in our valuation, we do not include a market revenue model for LOXL-2 for Idiopathic Pulmonary Fibrosis (IPF) as a potential secondary indication and therefore do not model royalty revenue as a percentage of net sales from this indication to PXS. Confirmation of IPF as a second indication by PXS' future partner and progress of this into Phase 2 clinical trials is likely to considerably increase the market opportunity for this asset, in which case it's likely to be a source of considerable upside to our valuation in future.
- **No sales milestones from LOXL-2 deal included in our model:** At this stage we do not model PXS' share of the assumed US$180m sales milestones from a potential LOXL-2 deal in our model. We intend to include it in our model once a LOXL-2 deal is inked by PXS, in which case it's likely to be a source of upside to our valuation.
- **Conservative assumptions for BI_1467335 for DR in absence of Phase 2 clinical data:** Our market penetration & pricing assumptions, are all based on the premise that BI 1467335 will offer a new mechanism of action and a new oral delivery route to treat patients with nonproliferative Diabetic Retinopathy, where currently anti-VEGF drugs with multibillion dollar sales and delivery via intra-ocular injections are the main stay, with laser treatments the second choice of treatment. Our base assumption at this stage is that BI_1467335 is likely to be used at an earlier stage of the disease and will be priced at a discount to the annual cost of anti-VEGF treatment. We note that the price and market share will ultimately be dictated by efficacy. In the absence of Phase 2 clinical data we are conservative in our assumptions at this stage.
- **No value assigned for other early stage pipeline assets:** We also do not include any value for PXS' early stage assets namely 2 LOX inhibitors (systemic and topical). The LOX inhibitor program is developing a drug which broadly inhibits all the LOX family of enzymes, which has potential anti-fibrotic application in scarring (a topical formulation) and other severe fibrotic indications including some cancers (a systemic formulation).

  PXS initiated a Phase 1 trial in healthy volunteers with its LOX systemic asset PXS-5505 in Feb'19. The SAD (single ascending dose) part of this study was completed in June'19 and the company has just initiated the second MAD (multiple ascending dose) in 1QFY20, results from which are expected in 1QCY20. Phase 1A data was positive showing good PK profile and inhibition of all LOX family of enzymes. PXS has also generated positive results from its LOX systemic asset in myelofibrosis and pancreatic cancer in preclinical models and has completed 3 month toxicology studies in parallel with the ongoing Phase 1 trial in healthy volunteers. Longer term tox studies (6 months) are also being carried out in parallel for the compound. IND to start Phase 2 (in myelofibrosis, a bone marrow cancer) is being targeted for filing with the FDA by mid-CY20, with the view to initiate Phase 2 studies before the end of CY20. Company expects to obtain orphan drug designation from the FDA for myelofibrosis, prior to initiating Phase 2 trials. They estimate that the myelofibrosis market is valued in excess of US$1bn per annum.

  Preclinical development is continuing for the topical asset (3 month tox studies were initiated in 1QFY20). PXS expects to start a Phase 1 trial in healthy volunteers with scarring in CY20 (BPe 2HCY20).

  PXS believes that the above two assets may have higher potential and value add if developed to Phase 2A or 2B before partnering, vs. the strategy with its later stage assets targeting NASH which it looked to partner at or after Phase 1. Progress of these two assets into Phase 2 trials in future is likely to be a source of upside to our valuation.
- **We model limited markets for Bronchitol and risk adjust the US opportunity:** For Bronchitol, we model the existing markets of Australia, Western Europe including Italy, Eastern Europe and Russia and also model US, following the recent positive recommendation in support of approval by the FDA advisory committee and CRL

received from the FDA. PXS' US partner Chiesi is responsible for its commercialisation. Should Bronchitol get approved and launch in US, PXS will receive a US$10m milestone from Chiesi, additional US$15m sales milestones and a mid to high teen percentage of royalties on net sales. At this stage we assign US sales and the launch milestone from Chiesi a 90% probability of success, given FDA approval is yet to be granted, although the likelihood based on the CRL is high. FDA approval and launch of Bronchitol in the US therefore will be an upside to our valuation for PXS. We also do not model the US$15m sales milestone receivable from Chiesi on meeting certain undisclosed sales thresholds at this stage, which would represent an upside.

- **We model limited markets for Aridol:** For Aridol, we model the existing markets of Australia, Europe and South Korea and US where the company relaunched Aridol in Dec'18 following FDA approval of its manufacturing facility. We also model revenue from Canada, given Aridol received approval in June 2019 and PXS has now supplied its first (launch) order to Methapharm for Canada in 2QFY20.
- **Small contribution from Bronchitol and Aridol segment in our valuation:** With the addition of the US opportunity for Bronchitol in our model, we now expect the Bronchitol and Aridol segment to transition to profitability over the next 1-2 years. Excluding the US opportunity, we believe Russia for Bronchitol may surprise us on the upside, however at this stage we choose to be conservative till we see increasing traction in Russia for Bronchitol after obtaining wider reimbursement.

Pharmaxis Ltd. (PXS)

COMPANY DESCRIPTION

Pharmaxis, is a biopharmaceutical company focused on the development of drugs for inflammatory and fibrotic diseases. Its lead assets Phase 2 SSAO/VAP-1 inhibitor BI_1467335 partnered in a multi-million dollar deal with Boehringer Ingelheim is targeting Diabetic Retinopathy an area of unmet need and a large market, and currently unpartnered Phase 1 LOXL-2 inhibitors are targeting Non-alcoholic Steatohepatitis (NASH), a multibillion dollar market, estimated to grow to be ~US$20bn-US$35bn. The LOXL-2 drug while not first-in-class, has evidence that it is best-in-class and can be useful in other fibrotic diseases and we forecast it to be a blockbuster (i.e. have over US$1bn in peak sales). NASH market is expected to grow with rise in obesity and surpass HCV as the leading cause of liver transplant by 2020. There are currently no approved drugs which make the market largely untapped and underserved. The multifactorial aspect of NASH and future treatments likely to be a combination of therapies ensures that companies remain on the lookout for promising assets to license, which bodes well for licensing prospects for PXS' LOXL-2 inhibitors. PXS is also focusing on developing its earlier stage pipeline (LOX assets) targeting scarring and myelofibrosis (est. >$1bn market). PXS also has two marketed respiratory products Bronchitol and Aridol which we view as non-core, however they represent an existing albeit small revenue stream for PXS with potential upside should US approval come through and the segment achieve profitability.

INVESTMENT STRATEGY

We have a Buy (speculative) recommendation on Pharmaxis. Our investment thesis is based on:

$0.26 valuation: We value PXS using a risk adjusted DCF at $0.26. The valuation is approximately a 126.1% premium to the previous closing share price of $0.115/sh.

Turnaround prospects are strong in CY20: PXS had a disappointing set back in 4QCY19 which caused a significant fall in its stock price, when partner Boehringer Ingelheim (BI) decided to discontinue further development of the partnered SSAO/VAP-1 drug BI_1467335 for NASH. However, we believe at current price levels PXS represents a compelling 'Buy' given its strong turnaround prospects in CY20. Key inflexion points which could drive this turnaround include: a) Results from phase 2A trials for BI_1467335 partnered with BI in Diabetic Retinopathy (DR) and BI's commercial decision regarding further development of the asset for DR is expected in 2HCY20; b) LOXL-2 asset has successfully completed Phase 1 trials and longer term toxicology studies, as well as added to the data package with further supporting studies providing evidence around its utility in fibrotic disease but also its best in class characteristics. The company has been in partnering discussions for a while which have taken longer than the company initially expected. The discussions and due diligence by interested parties are ongoing and we now expect a conclusion of the partnering process by mid-CY20; and c) Also by mid-CY20 we expect FDA approval decision on bronchitol, which is expected to be followed by a US$10m milestone from PXS' partner Chiesi in 3QCY20.

LOXL-2 targeting NASH has blockbuster potential: Pharmaxis' Phase 1 LOXL-2 asset is targeting Non-alcoholic Steatohepatitis (NASH), a multibillion dollar market, estimated to grow to be ~US$20bn-US$35bn. We model US$1.45bn peak worldwide sales (pre risk adjustment) for LOXL-2 in NASH.

NASH represents significant commercial opportunity: NASH is a large market, growing rapidly with an increasing obese population. It is estimated that NASH will surpass Hepatitis C Virus (HCV) as the leading cause of liver transplants by 2020. There are currently no drugs approved for NASH, which makes this market largely untapped and underserved and a lucrative market opportunity for PXS to target. There are several drugs

in development and interest and competition has both heated up. There have been a number of high value deals in this space recently and active companies are looking to license or acquire to build a portfolio of assets targeting different stages of NASH. Average deal sizes are around US$860m, however some deals recently have been over $1bn.

PXS emerging as a key player in NASH: Drugs targeting NASH in development fall under 3 groups based on their mechanism of action and stage of NASH they target – metabolic modifiers, anti-inflammatory agents and anti-fibrotic agents. It is expected that the future treatment for NASH is likely to be a cocktail of therapies as was seen earlier with HCV. Therefore we see drugs from each of the 3 categories to complement each other and competition likely to be restricted to drugs within the same category. Pharmaxis' LOXL-2 asset is an anti-fibrotic agent and therefore should complement other drugs in advanced development. There are very few drugs in development in this category and as far as we are aware it is the only one in its class being actively developed for NASH.

Drugs not first-in-class but potentially best-in-class: PXS' LOXL-2 inhibitors are not the first in their class. However based on pre-clinical data and Phase 1 data, we believe the drugs possess a more favourable PK/PD profile which position them as best-in-class. Data so far provides evidence of good safety profile, good oral bioavailability and potent, long lasting inhibition of targeted enzyme.

Potential exists to expand the use of lead drugs into broader fibrotic diseases: Both the lead drugs have potential to be used across fibrotic diseases with both SSAO and LOXL-2 enzymes upregulated in other areas such as lung and kidney, implying a broader utility in treating other diseases such as pulmonary fibrosis (IPF) and kidney fibrosis.

Partnership with Boehringer Ingelheim validates chemistry platform: PXS signed a multi-million dollar product acquisition deal with Boehringer Ingelheim (BI) in 2015, which marked the start of the turnaround for the company, strengthened its balance sheet and validated its amine oxidase chemistry platform and its ability to execute valuable deals. Although, the company had a disappointing set back in 4QCY19 with BI choosing to not pursue NASH for the partnered asset anymore, the deal has delivered to date €57m (A$83m) in upfronts and milestones to PXS and BI is still continuing to develop the asset at this stage for Diabetic Retinopathy. Should BI continue to proceed with further development for DR, PXS stands to receive €177m in Phase 3 initiation, filing and approval milestones. Commercial milestones on reaching sales thresholds and royalties on net sales post approval are also part of the deal as it currently stands.

Eary stage pipeline assets represent future value: PXS' LOX (systemic) drug is targeting the bone marrow cancer myelofibrosis with an estimated market value of over $1bn per year. PXS expects to complete Phase 1 trials in 1QCY20 and proceed with filing for orphan drug designation and IND for a Phase 2 trial by mid-CY20, targeting start of a phase 2 trial before end CY20. The pre-clinical topical LOX asset targeting scarring is also expected to start Phase 1 trial in health volunteers before the end of CY20, following completion of ongoing pre-clinical studies. We do not assign any value to these assets currently, however they represent future upside on progression into mid stage trials.

Strong cash position: PXS' had cash at end of 2QFY20 of ~A$25.9m, which in our view, provides PXS ~13 months cash runway, with flexibility to defer some expenses on other pipeline programs to further extend this runway. A US$10m Milestone from Chiesi for Bronchitol in 3QCY20 and upfront from a LOXL-2 deal in CY20 should further extend this cash runway. The company has a modest debt (related to finance lease) of A$9.0m. PXS is now focused on accelerating the development of its earlier stage LOX systemic and topical assets for myelofibrosis/pancreatic cancer and scarring. PXS' strong cash position allows the company to move these LOX assets through Phase 2A/2B development (to potentially enhance their value) before partnering them out.

Risks

The key risks specific to Pharmaxis include, but are not limited to, the following:

- **Clinical risk:** There is a risk that PXS' clinical trials for its pipeline assets fail to reach their endpoints, which would in turn impact its commercial and partnering prospects.
- **Timing and clinical risk on partnered product:** For its partnered product BI_1467335, PXS is reliant on Boehringer Ingelheim (BI) for development timelines. The ability of PXS' product to finally reach the market and translate into royalty revenue streams for it depends on BI. Delays in timelines will affect medium term milestone payments to PXS as well as its long-term revenue flow. Also if the product fails at any stage of clinical development or BI decides to discontinue the development of the product for DR (as it has already done for NASH) PXS' ability to generate revenue from this asset will diminish/or fail totally.
- **Reliance on partnerships to unlock value:** The success of PXS' business model is underpinned by its ability to ultimately attract valuable partnering deals for its assets, given PXS lacks the commercial infrastructure to support commercialisation. Our valuation in part is underpinned by PXS' ability to ultimately attract a valuable partnering deal for its LOXL-2 asset. Failure to attract partners for this asset or to negotiate attractive deal terms as we have postulated will impact our forecasts.
- **Bronchitol US approval decision will affect our valuation:** While we look at Bronchitol and Aridol, PXS' currently marketed products as non-core assets and attribute minimal value to it, our inclusion of Bronchitol's US opportunity makes our valuation vulnerable to FDA's decision on Bronchitol. FDA has issued a CRL detailing matters which Chiesi still need to address prior to approval. Key matters pertain to revisions to packaging and user instructions and running a Human Factor Study after these to test their effectiveness in enabling healthcare professionals to properly conduct a mannitol tolerance test (MTT). PXS expect approval by mid-CY20. We currently assign a 90% probability of success to US sales of Bronchitol.
- **Regulatory risk:** Successful commercialisation of PXS' products is ultimately dependent on getting approval from the regulatory authorities to commercially launch the product. While PXS' partner with much more experience in navigating regulatory channels will be responsible for obtaining approvals, failure to satisfy regulatory requirements could mean that the product will fail to reach the market.
- **Commercial risk:** The pharmaceutical market is intensely competitive and in particular the NASH space which PXS is targeting has several companies engaged in drug development. PXS' products are unlikely to be the first to market and therefore would not have first mover advantage. There is no guarantee that mid-late stage clinical trial results of the LOXL-2 drugs, even if they hit the endpoints of the studies, will be viewed as clinically meaningful by clinicians' vis-à-vis other approved NASH drugs by then on the market. Even if the drugs do get approved on successful pivotal studies, commercial adoption might still be hampered by the cost of the combination (especially since in LOXL-2's case we assume an add-on therapy positioning) or the competition in the NASH market having much larger impact than we have postulated.
- **Funding risk:** Delays in partnering of LOXL-2 may impact PXS' funding position in the medium term. PXS has cash of A$25.9m and debt related to finance lease of A$9.0m. Although PXS has a high cash balance currently, which should provide ~13 months cash runway, the company may need to raise additional capital for funding its requirements beyond that should there be delays in partnering its LOXL-2 asset or in receiving the US$10m milestone from Chiesi. There is no guarantee that PXS will be able to secure additional financing if and when required.

Pharmaxis Ltd.
as at 6 February 2020

Recommendation	Buy, Speculative
Price	$0.115
Valuation	$0.26

Table 7 - Financial summary

Pharmaxis Ltd (PXS) — **Share price (A$) $0.115**
As at 5 February 2020 — **Market cap (A$m 45.4**

Profit and Loss

Y/e June 30 (A$m)	2018A	2019A	2020E	2021E	2022E
Product Sales Revenues	6.1	5.7	6.5	10.3	12.8
Other Revenue (commercial)	43.5	0.0	13.3	21.9	0.0
Other Income	0.7	6.5	0.7	0.5	3.5
Total Revenue	**50.2**	**12.2**	**20.5**	**32.7**	**16.3**
EBITDA	**11.5**	**-15.7**	**-4.0**	**5.2**	**-7.1**
Depreciation & Amortisation	-3.1	-2.6	-3.2	-3.3	-3.3
EBIT	**8.4**	**-18.3**	**-7.2**	**2.0**	**-10.3**
Net interest & Other Income/(Expense)	-0.8	-0.7	-0.8	0.1	0.2
Pre-tax profit	**7.6**	**-19.0**	**-8.1**	**2.1**	**-10.1**
Tax	0.0	0.0	0.0	0.0	0.0
Net profit (loss) normalised	**7.6**	**-19.0**	**-8.1**	**2.1**	**-10.1**
Abnormal items	-1.2	-1.1	-1.2	-1.3	-1.4
Reported Net profit (loss)	**6.4**	**-20.1**	**-9.2**	**0.8**	**-11.5**

Cashflow

Y/e June 30 (A$m)	2018A	2019A	2020E	2021E	2022E
Reported NPAT	6.4	-20.1	-9.2	0.8	-11.5
Non-cash items	5.6	5.6	5.8	5.0	4.9
Net change in Working capital	0.1	-5.4	3.2	1.8	-3.0
Operating cashflow	**12.2**	**-19.8**	**-0.2**	**7.6**	**-9.6**
Capex	-0.8	-0.6	-0.4	-0.6	-0.6
Investments	0.0	0.0	0.0	0.0	0.0
Investments in intangible assets	0.0	-0.4	-0.4	-0.4	-0.4
Other investing cash flow	0.0	0.0	0.0	0.0	0.0
Investing cashflow	**-0.9**	**-1.0**	**-0.8**	**-1.0**	**-1.0**
Change in borrowings	-1.5	-1.6	-2.2	-2.2	-2.4
Equity issued	0.0	22.7	0.0	0.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0
Other financing cash flow	-0.2	-0.3	-0.3	-0.8	-0.8
Financing cashflow	**-1.8**	**20.8**	**-2.5**	**-3.0**	**-3.3**
Net change in cash	**9.6**	**0.1**	**-3.5**	**3.6**	**-13.8**
Cash at end of period*	31.1	31.1	27.6	31.3	17.4
* Includes effect of exchange rate fluctuations on cash balance					
Free cash flow (op. CF less capex and intangibles)	**11.3**	**-20.8**	**-1.0**	**6.6**	**-10.6**

Balance sheet

Y/e June 30 (A$m)	2018A	2019A	2020E	2021E	2022E
Cash	31.1	31.1	27.6	31.3	17.4
Current receivables	2.4	7.2	2.1	1.3	4.3
Inventories	2.4	2.1	2.3	2.4	2.5
Other current assets	0.1	0.1	0.1	0.1	0.1
Current assets	**36.0**	**40.6**	**32.2**	**35.1**	**24.4**
PPE	12.5	10.3	9.4	6.6	3.8
Non-current receivables	1.2	1.1	1.3	1.3	1.3
Intangible assets	0.4	0.8	1.1	1.4	1.7
Other non-current assets	0.0	0.0	0.0	0.0	0.0
Non-current assets	**14.1**	**12.1**	**11.8**	**9.2**	**6.7**
Total assets	**50.1**	**52.7**	**44.0**	**44.4**	**31.2**
Payables	5.6	4.8	2.8	3.8	3.8
Debt	8.3	7.2	8.2	6.4	4.3
Provisions	1.0	1.1	1.2	1.3	1.4
Financial liabilities (Novaquest financing agreement)	22.8	23.6	24.1	23.4	22.5
Deferred Lease Incentive	1.4	1.1	0.9	0.7	0.4
Other liabilities	0.0	0.0	0.0	0.0	0.0
Total liabilities	**39.0**	**37.9**	**37.2**	**35.6**	**32.5**
Net Assets	**11.1**	**14.8**	**6.7**	**8.8**	**-1.3**
Shareholders' equity	344.6	367.3	367.3	367.3	367.3
Reserves	20.7	21.8	22.9	24.2	25.6
Retained earnings/(losses)	-354.2	-374.2	-383.5	-382.7	-394.2
Total shareholders equity	**11.1**	**14.8**	**6.7**	**8.8**	**-1.3**

Valuation data

Y/e June 30	2018A	2019A	2020E	2021E	2022E
Net profit -normalised (A$m)	7.6	-19.0	-8.1	2.1	-10.1
EPS - normalised (c)	2.4	-4.8	-2.0	0.5	-2.6
EPS growth (%)	NM	N/A	N/A	NM	N/A
P/E ratio (x)	4.8	N/A	N/A	21.9	N/A
FCFPS (c)	3.5	-5.3	-0.2	1.7	-2.7
Price/FCF (x)	3.2	-2.2	-46.5	6.9	-4.3
DPS (c)	0.0	0.0	0.0	0.0	0.0
Yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%
Franking (%)	N/A	N/A	N/A	N/A	N/A
EV/EBITDA	2.5	-1.8	-7.2	5.5	-4.0
EV/EBIT	3.4	-1.6	-3.9	14.6	-2.8

Share price now (A$)	$0.115
Valuation (A$):	$0.26
Premium (discount) to price	126.1%
Recommendation:	Buy
Risk Rating	Speculative

Profitability ratios

Y/e June 30	2018A	2019A	2020E	2021E	2022E
EBITDA margin (%)	22.9%	N/A	N/A	15.9%	N/A
EBIT margin (%)	16.7%	N/A	N/A	6.0%	N/A
Return on assets (%)	15.2%	-36.0%	-18.3%	4.7%	-32.6%
Return on equity (%)	68.5%	NM	NM	23.5%	NM
Dividend cover (x)	N/A	N/A	N/A	N/A	N/A
Effective tax rate (%)	0.0%	0.0%	0.0%	0.0%	0.0%

Liquidity and leverage ratios

Y/e June 30	2018A	2019A	2020E	2021E	2022E
Net debt (cash) (A$m)	-22.8	-24.0	-19.5	-24.8	-13.1
Net debt/equity (%)	N/A	N/A	N/A	N/A	N/A
Net interest cover (x)	NM	N/A	NM	-4.2	N/A
Current ratio (x)	4.4	5.0	4.8	4.3	2.9

Segmentals

Y/e June 30	2018A	2019A	2020E	2021E	2022E
Bronchitol and Aridol					
Product Sales	6.1	5.7	6.5	10.3	12.8
Other revenue (Clinical trial cost reimbursement)	1.3	0.0	0.0	12.5	0.0
Other income	0.0	0.0	0.0	0.0	0.0
Total Revenues	**7.5**	**5.7**	**6.6**	**22.8**	**12.8**
EBITDA	**-3.8**	**-5.0**	**-5.3**	**10.7**	**0.4**
New Drug Development					
Product Sales	0.0	0.0	0.0	0.0	0.0
Other revenue (Milestone+license+royalty)	42.1	0.0	13.3	9.4	0.0
Other income (R&D tax incentive etc.)	0.2	6.0	0.3	0.0	3.0
Total Revenues	**42.3**	**6.0**	**13.5**	**9.4**	**3.0**
EBITDA	**28.8**	**-6.8**	**4.8**	**-1.9**	**-3.9**
Corporate					
Other income	**0.5**	**0.5**	**0.4**	**0.5**	**0.5**
EBITDA	**-13.5**	**-3.9**	**-3.5**	**-3.6**	**-3.6**
Total Company					
Revenues	**50.2**	**12.2**	**20.5**	**32.7**	**16.3**
EBITDA	**11.5**	**-15.7**	**-4.0**	**5.2**	**-7.1**

Interims

Y/e June 30 (A$m)	2H18A	1H19A	2H19A	1H20E	2H20E
Revenue	19.1	2.5	9.7	3.8	16.7
EBITDA	3.7	-9.8	-5.8	-8.0	4.0
Depreciation & Amortisation	-1.5	-1.3	-1.3	-1.6	-1.6
EBIT	**2.2**	**-11.1**	**-7.2**	**-9.6**	**2.4**
Net interest & Other Expense	-1.1	-0.8	0.1	-0.2	-0.7
Pre-tax profit	1.1	-11.9	-7.1	-9.8	1.7
Tax	0.0	0.0	0.0	0.0	0.0
Net Profit (loss) - normalised	**1.1**	**-11.9**	**-7.1**	**-9.8**	**1.7**
Net Profit (loss) - reported	0.5	-12.6	-7.5	-10.3	1.1

SOURCE: BELL POTTER SECURITIES ESTIMATES

Recommendation structure

Buy: Expect >15% total return on a 12 month view. For stocks regarded as 'Speculative' a return of >30% is expected.

Hold: Expect total return between -5% and 15% on a 12 month view

Sell: Expect <-5% total return on a 12 month view

Speculative Investments are either start-up enterprises with nil or only prospective operations or recently commenced operations with only forecast cash flows, or companies that have commenced operations or have been in operation for some time but have only forecast cash flows and/or a stressed balance sheet.

Such investments may carry an exceptionally high level of capital risk and volatility of returns.

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