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Equity Research

Medical Developments Limited (MVP)

Global Expansion Well Underway - Initiation of Coverage

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Summary

We initiate coverage on MVP with an Accumulate recommendation and a valuation range of $4.66 to $6.80. We set our 12-month price target at the midpoint, $5.70 which represents a potential 12-mth TSR of 33%.

MVP has 3 segments:

1. Pharmaceuticals (59% of FY18 sales) - is engaged in the manufacture and sale of the Penthrox "green whistle" emergency pain relief product;
2. Medical Equipment ("Space Chambers" and other respiratory care devices)(37% of sales); and
3. Veterinary Equipment (4% of sales).

Key Points

- The two main segments are both undergoing strong international geographic expansion.
- We forecast Penthrox sales to go from $8.1m in FY18 to $126m for the 38 approved countries only, under a 12 year roll out scenario.
- Approvals to be sought for a further 50+ countries including USA, China and Russia could take this to $260m of annual sales (not in our forecasts).
- The product is proven with >5m doses sold over 30 years+ in Aust & 14 yrs in NZ. The regulatory dossier continues to grow, and approvals have been received for 38 countries. Product launches are underway or imminent with quality major healthcare distribution partners.
- Major distributors have paid $41m in upfronts and early milestones to secure their territories including: Galen $1.6m for the UK/Ireland; Mundipharma $16.4m for Europe; Purdue $1.5m for Canada; and Daiichi Sankyo $21m ($7m net of est costs) for China Thailand and Vietnam. This is a strong sign of confidence in Penthrox.
- The Medical Equipment segment sales are also ramping up, with new ranging in Walmart, Kmart and Costco pharmacies in the USA.
- We value MVP at around $4.66 with a 40% risk weighting on non-approved countries. However we can see upside to $6-7 per share with a number of catalysts in the next 12 mths.

Catalysts

- Penthrox German milestone expected in FY19 (US$2.0m).
- Penthrox new country launches and initial sales.
- Penthrox US application currently on clinical HOLD; MVP hopes to meet with the FDA in Q1 2019 to resolve and restart the approval program.
- Interim results to confirm accelerating revenues and update progress on international expansion.

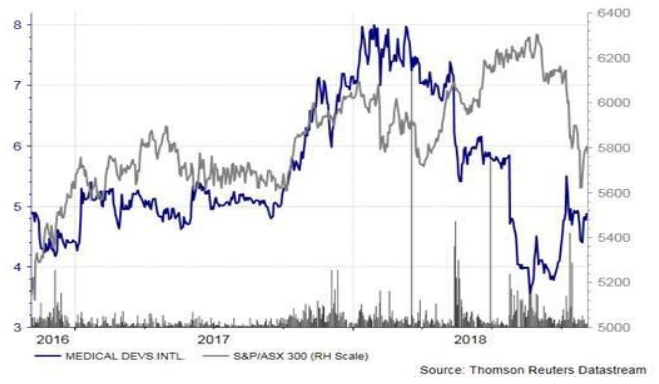
Recommendation	Accumulate
Risk Rating	**High**
12-mth Target Price (AUD)	**$5.70**
Share Price (AUD)	$4.32
12-mth Price Range	$3.56 - $8.07
Forecast 12-mth Capital Growth	31.9%
Forecast 12-mth Dividend Yield	0.9%
12-mth Total Shareholder Return	**32.8%**
Market cap ($m)	280.2
Net debt (net cash) ($m)	Net cash (22.1)
Enterprise Value ($m)	258.1
Gearing (Net Debt/ Equity)	n/a
Shares on Issue (m)	64.9
Sector	Healthcare
Average Daily Value Traded ($)	$674,000
ASX 300 Weight	n/a

Financial Forecasts & Valuation Metrics

Years ending Jun $m	17(a)	18(a)	19(e)	20(e)	21(e)
Sales revenue	18.3	17.5	23.4	28.6	34.1
EBITDA	3.8	2.2	4.0	5.8	8.3
NPAT pre-g'will	1.8	0.2	1.5	2.2	3.0
EPS (cents)	3.1	0.4	2.3	3.3	4.5
EPS growth pre-g'will	16%	-87%	464%	41%	37%
DPS	4.0	4.0	4.0	4.0	4.0
P/E	141.4	1,077.6	191.0	135.4	98.5
EV/Ebitda	68.7	122.0	67.1	48.5	35.7
Yield	0.9%	0.9%	0.9%	0.9%	0.9%
Franking	100.0%	100.0%	100.0%	100.0%	100.0%
Net debt / equity	Net Cash	40.2%	Net Cash	Net Cash	12.5%

Source: PhillipCapital estimates

MVP share price performance



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Company Description

Aussie company – On the cusp of a major international expansion

Medical Developments International Limited (MVP), is an Australian based healthcare company. The Company operates through three segments: Pharmaceuticals, Medical Devices and Veterinary products.

Pharmaceuticals segment (59% of FY18 sales) - is engaged in the manufacture and sale of "Penthrox" (methoxyflurane), a generic pharmaceutical product which provides pre- hospital and emergency pain relief, by being inhaled by the patient through an associated delivery device (the Penthrox inhaler, also known as the "green whistle"). Penthrox has been manufactured in Australia by MVP since 2002, and MVP is the only known manufacturer of the drug. Sales have expanded from Australia and New Zealand, into several major new markets including the United Kingdom, Ireland, and France, with approvals now received for 38 countries and launches in progress.

Medical Devices segment (37% of Sales) – This segment is engaged in the sale of medical devices that improve respiratory care. These include anti-static valved holding chambers ("Space Chambers") for the delivery of asthma and COPD medications, "Breath Alert" breathing flow meters, and finger-tip pulse oximeters for measuring oxygen levels in the blood. Sales are approximately 50/50 Australia and a growing list of 20 countries in North America, Europe and Asia.

Veterinary Products segment (4% of sales) - is engaged in the sale of veterinary products within Australia, Europe and the United States. The Company offers a range of products in the areas of pain management, and asthma and resuscitation.

MVP has been profitable every year since listing, and has only had one capital raising since IPO being the recent $24.5m placement and SPP in Aug/ Sep 2018 (at $4.00 per share). MVP has funded its own growth.

13 Year Review

Below is a 13 year overview of the company's financial performance since 2005 (being the first full year if trading post IPO).

- 9.4% compound annual sales growth.
- 5.6% compound annual ebitda growth.
- 2.5% compound annual growth in EPS.
- 16.0% CAGR in the share price.
- The above was achieved whilst investing heavily in gaining international approvals, with Penthrox now approved in 38 countries, versus just Australia at the time of the IPO.
- No major equity issues, until FY19. MVP has successfully funded its growth from cash flow, and some upfront licence payments, until very recently.

MVP - 13 Year Review	FY05 $m	FY18 $m	13-Yr CAGR	Comments
Pharmaceuticals Segment				
External Revenue	3.0	8.1	7.8%	Purely organic
Amortisation of upfronts	0.0	2.2	n/a	$19.9m of cash upfronts received in FY15-18; $25m expected in FY19.
Total Revenue	**3.0**	**10.2**	**9.8%**	We expect a sig acceleration of revenue as new countries come on
Countries approved	1	38	3700%	Approvals now for 38 countries, and growing. Actual launches lag this.
EBITDA	1.2	4.4	10.3%	
EBITDA Margin	40.8%	43.2%		Healthy margins; But O/seas registration costs are capitalised
EBIT	1.1	3.0	8.3%	
EBIT Margin	35%	29%		Healthy margins; But O/seas registration costs are capitalised
Segment Assets	1.9	35.0	25.3%	
Medical Equipment Segment				
External Revenue	1.9	6.5	9.8%	Includes one acqn, with Sales of $1.8m (from Avita Medical, in Dec 15)
External Rev ex acqn		4.7	7.1%	Purely organic
EBITDA	0.6	0.4	-2.3%	MVP continues to invest in overseas expansion. FY18 was a low year (timing)
EBITDA Margin	29.7%	6.5%		
EBIT	0.6	0.2	-6.8%	FY18 was a low year (timing etc)
EBIT Margin	29.7%	3.5%		
Segment Assets	0.7	10.0	23.0%	
Veterinary Equipment Segment				
External Revenue	0.4	0.8	4.1%	Modest growth here
EBITDA	0.1	0.3	7.4%	
EBITDA Margin	23.1%	34.3%		
EBIT	0.1	0.2	6.1%	Small contribution to group, and overhead recovery
EBIT Margin	23.1%	29.4%		
Segment Assets	0.1	1.1	19.2%	
Group Revenue	5.4	17.5	9.4%	Decent. Expected to accelerate from here with new countries coming on
Group Ebitda	1.1	2.2	5.6%	Modest growth to date, due to heavy investment on overseas expansion
Group Ebitda Margin	20.2%	12.7%		
NPAT	0.168	0.243	**2.9%**	
EPS cents	0.3	0.4	**2.5%**	
Shares on Issue m	56.980	59.172	0.3%	No major share issues until August 2018 (FY19). Growth funded internally
Share price (June 30)	0.84	5.80	16.0%	Shares have been excellent performers, until recent fall on US delays
Source: Company data				

Phillip Capital Forecasts

- FY19 is off to a strong start, with Q1 sales +56% on the pcp, and gross margin up 32%.
- We are forecasting 34% revenue growth in FY19e, 22% in FY20e and 19% in FY21e as MVP's international expansion continues.
- Net profit (NPAT) growth, and EPS growth are also large, but MVP is coming off a low base. MVP has been investing for the future, and in our opinion, the current earnings do not yet reflect the true earnings potential of the company.
- Our forecasts include only the revenue and profits expected from the 38 countries where Penthrox has been approved to date. We expect to upgrade our forecasts in the future as major new countries are approved and come on stream. We show the potential impact to our valuation for other major countries such as the US and China in our DCF / Sum of the Parts valuation on page 5.
- We also show below our FY25 estimates (again for just the 38 approved countries) to show the step change in earnings we are expecting.
- We have forecast a large increase in depreciation and amortisation due to the new $4.1m manufacturing facility at Scoresby, and a large increase in amortisation of capitalised regulatory costs and clinical trial costs. As product sales commence in new countries, the amortisation expense also commences. This does not affect Ebitda, but is a dampener on NPAT.

Medical Developments Int Years ended June $m	FY16	FY17	FY18	FY19e	FY20e	FY21e	FY25e
				(38 approved Countries only)			
Sales revenue							
Pharmaceuticals (Penthrox)	10.0	11.0	10.2	13.8	17.3	21.7	62.6
Medical Equipment	4.9	6.6	6.5	8.7	10.5	11.5	14.0
Veterinary Equipment	0.5	0.7	0.8	0.8	0.9	0.9	1.1
Unalloc/Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	**15.5**	**18.3**	**17.5**	**23.4**	**28.6**	**34.1**	**77.7**
Revenue Growth	*33%*	*19%*	*-5%*	*34%*	*22%*	*19%*	*20%*
Ebitda							
Pharmaceuticals (Penthrox)	4.8	5.3	4.4	6.1	8.3	11.2	31.7
Medical Equipment	0.6	0.7	0.4	1.1	1.4	1.7	2.1
Veterinary Equipment	0.2	0.2	0.3	0.3	0.3	0.3	0.4
Unalloc/Other	-2.2	-2.5	-2.9	-3.5	-4.1	-5.0	-8.7
EBITDA	**3.4**	**3.8**	**2.2**	**4.0**	**5.8**	**8.3**	**25.5**
Ebitda Growth	*29%*	*12%*	*-41%*	*80%*	*45%*	*43%*	*25%*
Ebitda Margin	*22.0%*	*20.7%*	*12.7%*	*17.1%*	*20.3%*	*24.2%*	*32.8%*
Depreciation & Amortisation	-1.1	-1.3	-1.8	-2.3	-3.2	-4.0	-5.6
EBITA	**2.3**	**2.5**	**0.4**	**1.7**	**2.6**	**4.3**	**19.9**
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	**2.3**	**2.5**	**0.4**	**1.7**	**2.6**	**4.3**	**19.9**
Interest expense (income)	0.0	0.0	0.1	-0.4	-0.4	0.2	0.2
Pre-tax profit	**2.3**	**2.5**	**0.3**	**2.1**	**3.0**	**4.1**	**19.7**
Tax expense	-0.7	-0.6	-0.1	-0.6	-0.8	-1.1	-5.4
Tax rate (%)	31.8%	26.1%	19.3%	27.5%	27.5%	27.5%	27.5%
Minorities/pref divs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NPAT	**1.6**	**1.8**	**0.2**	**1.5**	**2.2**	**3.0**	**14.3**
EPS	**2.7**	**3.1**	**0.4**	**2.3**	**3.3**	**4.5**	**21.6**
EPS Growth	*-80%*	*16%*	*-87%*	*464%*	*41%*	*37%*	*35%*
DPS	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Franking	100%	100%	100%	100%	100%	100%	100%

Source: Phillip Capital estimates

Valuation & Recommendation

MVP looks very expensive on near term price earnings and EV/ sales multiples, compared to other medical device and pharmaceutical stocks. Also, it is difficult to find a good comparison for MVP:

Valuation Comparisons	Price	Market Cap $m	Revenue $m	P/E FY1	EV/ Sales
Resmed RMD	$14.31	20,425	2,340	26.8x	6.3x
Fisher & Paykel Health FPH	$12.50	7,144	981	32.7x	7.6x
Mayne Pharma MYX	$0.99	1,552	530	18.0x	3.6x
Nanosonics NAN	$2.94	881	60.7	62.5x	13.5x
Starpharma SPL	$1.51	561	5.0	31.4x	99.0x
Polynovo PNV	$0.55	359	6.0	138.0x	56.2x
Avita Health AVH	$0.08	110	1.7	n/a	54.6x
Medical Developments Int MVP	$4.36	285	17.5	132.6x	17.1x
Source: Thompson Reuters					

MVP's current modest level of profit has little relevance to its 5-10 year future earnings potential, as the Pharmaceutical segment (Penthrox) is in the early stages of a 38+ country geographic expansion. Also the Medical Equipment segment has only recently gained US FDA approval and listings in >15,000 US Pharmacies including WalMart, Kmart, Costco, Price Chopper, Sam's Club and Independent Pharmacy CoOp. So we consider a P/E based valuation is not appropriate at this early stage of the company's international development.

DCF / Sum of the Parts Valuation

We have valued MVP using a discounted cash flow method, and broken this down further into a sum of various components.

- We have chosen to value the US and China opportunities separately, so investors can consider the likelihood of MVP getting regulatory approvals to enter, and conducting a successful product launch in these large markets.
- Our base valuation for MVP is $4.66 per share, which includes a 40% risk weight on the 50+ country roll out (ex China & the US), and also a 40% risk weight on the China and US opportunities.
- If MVP is successful in gaining approval in these new markets, our valuation rises to $6.80 per share.
- In addition, there are several "blue sky" opportunities that MVP is working on which we have considered. These could take our valuation to around $7.71 per share.
- We value MVP shares in a range of $4.66 to $6.80, as there are many moving parts, and a wide range of valuation outcomes as MVP executes on its strategy.
- We set our 12-month price target at the midpoint of $5.70 per share, recognising that a wide range of outcomes are possible on a high growth, small cap stock such as MVP.

DCF / Sum of the Parts Valuation	Unrisked NPV $m	Unrisked Value Per Share	Risk Factor Applied	Risked NPV $m	Risked Value Per Share
1. Base Valuation of company	219.6	$3.36	n/a	219.6	$3.36
(Pharma includes 38 countries approved to date)					
2. Further Countries to be approved:	66.9	$1.02	40%	26.8	$0.41
(50 new countries, could be more)(exclude US & China)					
3. China Opportunity	48.7	$0.74	40%	19.5	$0.30
4. US Opportunity	92.8	$1.42	40%	37.1	$0.57
5. Mundipharma milestones (could be others)	16.6	$0.25	10%	1.7	$0.03
(assume A$52m max received in year 6, & 80% margin)					
Subtotal	444.5	$6.80		304.6	$4.66
Blue Sky Opportunities :					
5. Penthrox into new segments	22.0	$0.34	20%	4.4	$0.07
(Assume adds 10% to Pharma sales, from FY21)					
6. Value of new "flow" manufacturing technology					
5a. Internal use - Assume reduces Pharma Divn COGS	17.9	$0.27	10%	1.8	$0.03
from 30% to 27% from FY20					
5b. External use - New drug applications - Guestimate	20.0	$0.31	0%	0.0	$0.00
Total Valuation	504.5	$7.71		310.8	$4.75

Source: Phillip Capital estimates
Assumptions: 10 year DCF model; WACC 10.5%, TGR 4.0% except we use 5.0% for China

Positive Factors / Reasons to Buy

1. Geographic expansion – 90+ potential countries and $260m potential annual sales opportunity.

In FY18, MVP's Penthrox "green whistle" emergency pain relief drug and device had sales over $0.5m from just 3 locations (Australia $5.5m, NZ $1.0m and the Middle East $0.7m on Phillip Capital estimates). Penthrox worldwide product sales in FY18 were $8.1m. **We forecast Penthrox sales to go from $8.1m in FY18 to $128m for the 38 approved countries only, over a 12 year roll out scenario.**

We estimate the peak sales potential for MVP's 90 stated target countries to be around $260m, again assuming a 12 year gradual roll out in each country. The product is proven with >5m doses sold over 20 years+ in Australia & 14 years in NZ. The regulatory dossier continues to grow, and approvals have been received for 38 countries to date. Product launches are underway or imminent with quality major healthcare distribution partners. Work is underway to secure approvals for another 50+ countries including USA, China and Russia.

However, we so expect new competition to come in to some markets if / when Penthrox sales reach the A$100m mark (FY26 on our ramp up estimates).

Penthrox - Global Potential Table	Countries	Population (millions)	Est Peak Penetration	Projected Peak Units	Est Peak Rev (A$m)	Est Peak Ebitda (A$m)
Approved & Launched	20	457	1.2%	5,381,874	78	26
Approved but not yet launched	18	384	1.1%	4,192,886	50	16
Current	**38**	**841**	**1.1%**	**9,574,760**	**128**	**42**
Still to come	52	3,289	0.3%	10,908,069	135	45
Potential Countries on MVP's list	**90**	**4,130**	**0.5%**	**20,482,829**	**263**	**87**

Source: Phillip Capital estimates; Peak Ebitda margin of 33% assumed

2. Recent launches in UK, Ireland and France off to a good start and developing nicely.

The UK & Ireland launch is now in its 3rd year, and is progressing well with 436 customers, including 125 hospitals, 7 of the 11 major trauma centres in the UK, all major Irish hospitals and all Irish ambulance services, and a recommendation to be adopted for all UK ambulance trusts (although approvals in place with only 3 of the 13 UK ambulance trusts so far). We estimate UK/ Ireland sales could grow from below $0.5m in FY18, to a potential peak of $16m pa by year 12. The distributor has placed **5 orders to date,** so repeat orders and sell through are happening. We consider that MVP and its distribution partner Galen Pharmaceuticals are off to a good start, and the risk of failure also looks low given the adoption and approvals seen so far. But there is still a long way to go.

France - The launch is only in its 2nd year, and has achieved **272 customers (v 166 a year ago, +64%), and approvals with 121 hospitals** (targeting 350). Ambulance sales also happening. The distributor Mundipharma has placed **2 orders to date** (but none in FY18 or FY19 to date). So it is still early days, but looks promising. We forecast that France can become a $15m pa market for MVP.

3. Major pharmaceutical wholesale distributors have paid $41m in upfronts and early milestones to secure their territories

Including: Galen Pharmaceuticals $1.6m for the UK and Ireland; Mundipharma $16.4m for Europe; Purdue $1.5m for Canada; and Daiichi Sankyo $21m for China, Thailand and Vietnam (US$15m, but MVP is to fund the China approval process up to US$10m, so arguably a US$5m net upfront on this deal). In addition, there are further sales based and milestone payments on these deals, and MVP also expects to make a fair margin on the transfer price of the stock sold.

These upfront payments are non-refundable. Therefore, we believe they are strong sign of confidence that these experienced companies have in the sales potential for Penthrox in these various markets. The benefit to MVP is that it gets to utilise the considerable sales force and distribution networks of these companies eg Mundipharma has 7,800 employees including a large international sales force to greatly assist in the European country roll out.

4. US Opportunity

On 25/7/18, MVP's clinical program designed for Penthrox to be approved in the US, was put on "clinical hold" by the FDA, pending a letter outlining outstanding issues and concerns. MVP's share price fell more than 20% on that day (from $5.85 to $4.71) and is now 26%lower than before the announcement. MVP had always expected that the FDA would require a further clinical trial to satisfy their stringent requirements (in addition to MVP's existing regulatory dossier and 20+ year track record with 5-6m doses already administered, without issue), and had planned to spend US $10-15m on this program over the next 3-4 years. MVP is confident it can answer the FDA questions, and hopes to meet again with the FDA in 2019 Q1 to address the issues, and if necessary, rework the program.

If MVP can get the US program back on track, we expect a strong share price response. We estimate that potential peak US sales could be around $74m per annum, assuming a 12 year roll out. We incorporate costs of a $20m for a clinical trial and 3-4 year regulatory process. We value the US market opportunity at around $93m or A$1.42 per MVP share. However we apply a 40% risk weighting to arrive at A$0.57 per MVP in our base valuation.

If the approval programme gets back on track, it is then likely that MVP will be able to negotiate a licencing deal for the US, which could involve another large upfront payment to MVP. We have not factored that in to our DCF calculations at this stage.

5. China Opportunity

On 8/10/18 MVP announced an exclusive licencing and distribution deal for China, Thailand and Vietnam with Daiichi Sankyo of Japan (DS). DS is one of the largest pharmaceutical companies in Japan. DS will pay MVP up to US$32.5m (A$45.8m) including US$15m (A$21m) upfront, and sales based milestones. However MVP is required to fund the approval process up to US$10m (A$14m), so arguably this is a net A$7m upfront for MVP. MVP will own the intellectual property generated by the program. It is difficult to estimate the market potential for China, but we estimate China could generate peak sales of $14-38m to MVP, assuming 3 years to gain approval, and then a 12 year roll out. We allow for US$10m (A$14m) of regulatory costs and clinical trials. We value the China opportunity at A$49m or A$0.74 per MVP share. However we apply a 40% risk weighting to arrive at A$0.30 per MVP in our base valuation.

6. New segments – Children and Acute Pain

MVP's traditional core market is Hospital Accident & Emergency departments, ambulance, defence forces and sporting where the portability, ease of use and quick analgesic action are ideal. Most of MVP's approvals are for use in conscious adults for emergency pain relief. MVP believes there is a significant opportunity to extend the use of Penthrox into adolescents and children, and into other areas of painful treatment (eg Colonoscopies, burns & wounds, cosmetic surgery etc). This has already been happening in Australia and New Zealand, but does represent a potentially large additional opportunity globally. MVP has four clinical studies underway in these areas.

On the children & adolescents front, MVP is currently conducting a European clinical trial for children 6-17 years of age, with initial safety data expected soon. We understand MVP is working on several new models of the device, and has lodged patents. We would not be surprised to see a special children's product emerge.

Because it is early days on the international roll out for emergency pain relief, we have valued this opportunity conservatively at $22m, or $0.34 per share. However we apply a 10% risk weighting to arrive at A$0.03 per MVP in our base valuation, mainly because of timing.

7. New generation inhaler devices coming (MVP)

We understand MVP is working on several new models of the inhaler device, and has lodged patent applications. We understand this is probably still a couple of years away, so we have not factored anything specifically into our forecasts or valuation. New designs could help accelerate sales, broaden the appeal to new segments, and provide new patent protection to the combination product (generic drug + new patented devices).

8. New high volume, low cost "continuous flow" manufacturing process for Methoxyflurane has been developed over the last 7-8 years by CSIRO for MVP, and the new manufacturing facility at Scoresby was approved in March 2018. However MVP plans to continue to manufacture from its old batch process plant at Springvale, and commence manufacturing at the new plant in early 2019. The new process is said to have significant volume and cost benefits over the current batch process. There should be economies of scale as increased international demand leads to higher volumes. We assume this reduces the cost of goods sold (COGS) in the Pharmaceuticals division by 10% from around 30% to 27%, from FY20 (could be more). **This would add $18m or $0.27 per MVP share to our valuation.** We apply a risk weighting of 10% due to the costs of running both plants, and uncertainty over the timing of the volume ramp up, and us wanting to be being cautious about any major change to production processes.

9. Potential new "blue sky" opportunity to utilise MVP's new "continuous flow" manufacturing process to manufacture other large volume drugs.
In June 2017, MVP entered a new multi-year, multi-million dollar contract with CSIRO to develop new continuous flow drug manufacturing technologies. MVP has already made small quantities of Lydocaine and Salbutamol (a $6bn pa asthma drug) and has begun discussions with parties interested in MVP's technology. MVP owns the technology, so no royalty to CSIRO payable on successful commercialisation (CSIRO has some MVP options instead). At the AGM, the CEO John Sharman was quite excited about this potential, describing it "as important as digital processing was to film". CSIRO was involved in the design of MVP's existing batch process back in 2002, and the new process for Penthrox described above. Whilst it is hard to put any reliable figure on such an opportunity, but given the high credibility of CSIRO, and its long standing relationship with MVP on Penthrox, we have included a "guestimate" $20m "blue sky " valuation, but risked to 0% in our base case. We will watch with interest for further developments.

10. Medical Equipment segment - Growth proceeding nicely - This segment looks set for a banner year, with Q1 respiratory device sales up 58% on the back of recent listings in over 15,000 US pharmacies including WalMart, Kmart, Costco, Price Chopper, Sam's Club and independents. In market sales (ie sell through) were up 98% in the US, and 6% in Australia.

11. Strong balance sheet - with $24m raised recently in a placement and SPP at $4.00 per share (in Aug/Sep 18), and estimated Net cash of $33m at Dec 2018e.

Risks & Negative Factors

1. **Speed of Penthrox Ramp up in new markets** – The Aussie ramp up to the current fairly mature sales level of around $5.5m has taken about 30 years, and New Zealand sales 14 years since the IPO. This was achieved with not much spend on marketing. For the new international launches, MVP now has the marketing firepower and sales forces of its major international distributors, so the ramp up should be much faster. MVP expects the ramp up to be a "convex curve, not linear". Some commentators are assuming just 5 years to get to peak sales, but we haven't seen the evidence to justify that at this stage. We assume a more modest 12 year path to peak sales, and more modest overall penetration assumptions. We think that Hospitals and ambulance authorities take a long time to approve a new product like Penthrox, and then it takes even longer for penetration to build. Further, in emerging and developing countries with large populations, we believe it will be difficult to achieve sales (and payment) outside of the major western style cities where the major hospitals are located.
2. **We also expect to see a gradual decline in Sales Value per unit, and gross margins**, as more sales go through third party distributor channels, for both the Pharmaceuticals and Medical Equipment segments. However we are also expecting significant volume increases in both main segments.
3. **Understanding the Accounting** - Reported results, particularly the P&L do not tell the full picture; Need to look at the Balance sheet as well.
    - Upfronts and milestone income of $41m in the last 3 years are capitalised and then amortised back to the P&L over the life of the contract (or 10 years max). Only $2.2m was taken to profit in FY18; and we estimate $2.8m for FY19e; $3.2m for FY20e.
    - MVP had $15.5m of unearned income and government grants on the balance sheet at June 2018, in "Other Liabilities". This is expected to convert to income in subsequent years.
    - Regulatory approval costs and associated clinical trial costs are also capitalised to the Balance Sheet ($17.9m at June 2018), and then amortised back to the P&L post launch. Only $0.8m expensed in FY18; we estimate $1.5m for FY19e and $2.0m for FY20e.
    - MVP had "Other Intangible Assets" of $22.5m at June 2018 on the balance sheet, up from $15.1m in FY17, with $8.6m of additions (capitalised registration costs $7.3m, patent work $0.3m, and $1.0m on the CSIRO project), less $1.2m of amortisation expense taken to the P&L.
    - These are increasingly big figures, because of huge number of country launches being worked on by MVP.
    - Obviously the capitalised amount on the balance sheet undergoes impairment testing each year.
4. **Key product risk** – Penthrox currently represents 59% of revenue, 87% of Ebitda, and 71% of segmental assets. Although the product has had an excellent safety record over MVP's 14 years as a listed public company, there is always a risk of something adverse occurring, be it a regulatory issue, a safety issue, or some commercial issue. Or a new better pain killing drug could emerge in the market.

5. **Risk of new competition in Methoxyflurane** – Currently MVP is the only known commercial manufacturer of Methoxyflurane in the world. With annual sales of $8.1m, it is still a niche drug and probably too small for other competitors to get interested. But if the major geographic roll out proceeds as we expect, we think that Penthrox will attract new competition, probably when annual sales approach the A$100m mark. This would be in FY2025 on our forecasts. It is a generic drug, sold with a non-patented device. The current manufacturing process is a "trade secret". A competitor would need to work out how to manufacture the drug, and would need to go through a similar regulatory process that MVP has gone through. This represents a significant barrier to entry. MVP has several interesting strategies to help combat this threat. Firstly, MVP has 10 years market exclusivity in a number of the recently launched international markets that should prevent new competition arising in that period. Secondly the new continuous flow manufacturing technology should provide MVP with a useful cost advantage over new players. MVP has filed a patent application to protect this. MVP has filed 6 patents including several for new delivery devices. And by choosing major distributors in each market with exclusive agreements, MVP is well placed to retain the majority of its market share.
6. **Competitive advantage in Medical Equipment** – We are somewhat surprised and also impressed by the success MVP appears to be having with its range of respiratory devices. MVP took out a competitor in Australia by buying Avita (AVH)'s competing Breath-A-Tech business in Feb 2016, and this seems to have done well since, under MVP management. In the USA, recent ranging deals for MVP's anti-static space chambers in WalMart, Kmart, Costco etc appears to confirm that MVP has a current price and product competitive advantage - for now.
7. **Director selling** – There has been plenty of director selling over recent years, as MVP's share price has generally increased. Chairman David Williams has reduced his holding by 69% in the last 4 years, from 30.4m shares to 9.5m. In FY18 he sold 4.35m shares in Oct 17 at $5.40 (proceeds: $23.5m) and 5.0m shares in Mar 2018 at $7.50 (proceeds: $37.5m). He said this was been to improve liquidity in the stock. Allan McCallum sold 120,000 in Nov 17 at $6.94 ($833k).

   And CEO John Sharman sold 505,000, retaining just 5,125 shares. However Mr Sharman also has 300,000 options (strike price 1c) under the MVP long term incentive scheme. These options will only vest on the earlier of FDA approval of Penthrox for sale in the USA, or the company receives an unconditional takeover offer worth more than $300m (implies >$4.62 based on the current shares on issue).

MVP Directors Shareholdings							
Name	Appointed	30/6/14	30/6/15	30/6/16	30/6/17	30/6/18	Latest
David Williams, Chairman	16/9/03	30,370,890	23,371,990	17,809,855	17,970,388	9,459,584	9,524,990
Allan McCallum	27/10/03	477,497	477,497	381,690	384,671	267,015	272,189
Dr Harry Oxer	28/12/06	207,013	207,013	191,622	193,118	194,465	199,251
Max Johnston	5/11/12	30,000	30,000	30,131	30,365	30,576	34,489
Leon Hoare	27/9/13	0	10,000	10,043	10,121	10,191	13,995
Philip Powell	17/12/14	352,074	352,074	253,180	255,157	256,936	262,056
Officers							
John Sharman, CEO	(11/12)	609,230	109,230	28,683	510,312	5,125	n/a
M Edwards, Coy Sec	10/6/14	0	0	0	0	0	
Total Directors & Officers		32,046,704	24,557,804	18,705,204	19,354,132	10,223,892	
Changes in Directors & Officers shareholdings							
David Williams, Chairman		159,302	-6,998,900	-5,562,135	160,533	-8,510,804	65,406
Allan McCallum		7,402	0	-95,807	2,981	-117,656	5,174
Dr Harry Oxer		3,209	0	-15,391	1,496	1,347	4,786
Max Johnston		10,000	0	131	234	211	3,913
Leon Hoare		0	10,000	43	78	70	3,804
Philip Powell		352,074	0	-98,894	1,977	1,779	5,120
Officers							
John Sharman, CEO		609,230	-500,000	-80,547	481,629	-505,187	
M Edwards		0	0	0	0	0	0
Source: Annual reports; ASX announcements							

Pharmaceuticals segment

This is MVP's largest segment, representing 59% of FY18 Sales.

We show our forecasts for this segment below, and then discuss the history of the company and the evolution of the Penthrox business, which we believe is on the cusp of some major international expansion.

After a small dip in sales in FY18, we are expecting a strong rebound of +35% in FY19 based on 1) increasing ramp up in recently launched countries, and 2) new country launches. Penthrox revenue in Q1 was up 57% per the AGM, and there were no upfronts in that period. So we think we are being conservative.

We also model an increasing revenue item, being the amortisation of upfront and milestone payments received, but capitalised to the balance sheet. We estimate MVP will have around $40m on its balance sheet in "Other Liabilities" at December 2018 that will progressively be recognised as revenue.

We expect ebitda margins to improve due to increasing volumes, but note that sales through international distributors will have a lower gross margin as the distributor will seek to cover their own sales and distribution costs.

We expect 30-40% EBIT growth over each of the next 3 years.

Pharmaceuticals segment Years ended June $m	FY16	FY17	FY18	FY19e	FY20e	FY21e
External Sales	8.9	9.1	8.1	11.0	14.0	18.0
Milestone Rev amortisation	1.1	1.9	2.2	2.8	3.2	3.7
Revenue	**10.0**	**11.0**	**10.2**	**13.8**	**17.3**	**21.7**
Sales growth	42%	10%	-7%	35%	25%	26%
Ebitda	**4.8**	**5.3**	**4.4**	**6.1**	**8.3**	**11.2**
Ebitda growth	38%	11%	-16%	38%	36%	36%
Ebitda Margin	48%	48%	43%	44%	48%	52%
D & A	**-0.9**	**-1.1**	**-1.4**	**-1.9**	**-2.7**	**-3.3**
EBIT	**3.9**	**4.2**	**3.0**	**4.2**	**5.6**	**7.9**
EBIT growth	22%	7%	-28%	40%	33%	42%
EBIT margin	39.0%	38.1%	29.4%	30.5%	32.3%	36.5%
Source: Phillip Capital estimates.						

History of Company, and Penthrox (Methoxyflurane)

From humble beginnings

MVP was incorporated in 2003 to acquire the business and intellectual property of Medical Developments Australia Pty Ltd (MDA). The associated IPO in January 2004 raised $8.7m at an IPO price of $0.25 per share.

The MDA business had been established in 1972 by Dr David Komesaroff, who was a leading anaesthetist at Royal Melbourne Hospital, as well as being an inventor and entrepreneur. He conceptualised and then developed a large range of products manufactured by MDA, and some of the machines are still sold today are referred to as Komesaroff machines. He had published over 35 papers in the anaesthesia and resuscitator fields since 1968 and had served on numerous hospital and ambulance services appointments in the past 30 years. He died in 2007. His obituary written by ex MVP Director, Dr Harry Oxer (past Chairman of the Australian Resuscitation Council) described Dr David as “the father of effective ambulance pain relief in Australia”.

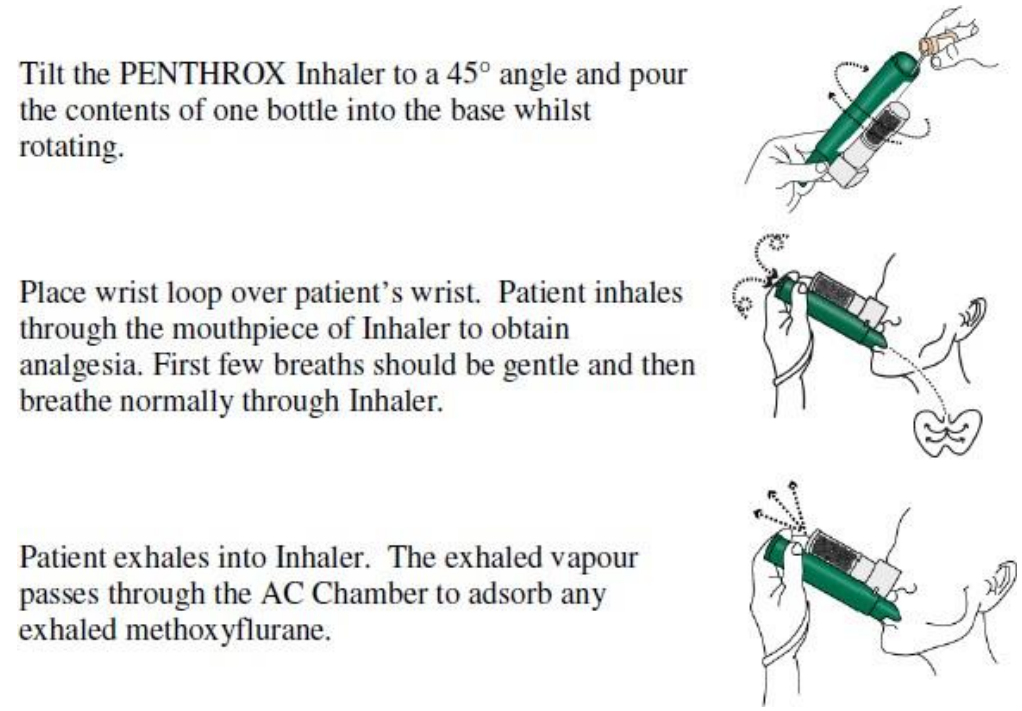
The business was acquired for $10.5m ($9.5m cash and a $1.0m vendor loan). It had Sales of $5.5m in FY03 and normalised EBIT of $2.1m, and just 14 staff, and no marketing.

The main pharmaceutical product sold is Methoxyflurane (trade name Penthrane) which had been registered for use in Australia since 1993 for analgesic use in humans. It was originally used on a world-wide basis in the mid 1960’s as a mainstream hospital anaesthetic. While effective, the drug was reported to cause kidney failure in some patients when used in high dosages and with prolonged administration. As better drugs for hospital anaesthetics were developed, its use declined and then ceased. However it continued to be used in dentistry and obstetrics (childbirth) using pull over masks or inhalers.

In 1975 the drug was introduced in the Victorian ambulance service for pre-hospital and emergency pain relief, using lower doses. Due to its success in Victoria, the drug was later taken up by other ambulances services here, and then overseas.

When the last US manufacturer stopped making the drug in 1999, MDA decided to manufacture it themselves at its premises in Springvale Melbourne. CSIRO helped them establish the original production process. MDA received approval from the TGA to commence manufacturing methoxyflurane (Penthrox) in December 2002.

How it works – Penthrox is a non-opioid alternative to drugs such as morphine and fentanyl, with a particular advantage in that it is self-administered by the conscious patient. The patient inhales the Penthrox vapour by breathing in and out through the inhaler. MVP say 85% of patients reach clinical analgesia (pain relief) within 6-10 breaths, and can top up with more breaths as required. The analgesic effect lasts about an hour from a single 3ml dose (a 1.5ml dose is also available) enabling time for the patient to be transferred by ambulance to the hospital, or to be extricated from a crashed vehicle, or for other short duration painful procedures such as changing the dressings on burns patients. It is a single use, disposable product. It is sold either with or without the AC chamber (activated carbon filter which absorbs the exhaled chemical), in 3ml or 1.5ml doses.



Source: Penthrox product information sheet

At the time of the IPO, Penthrox was widely used by ambulance services in Australia, and also in sporting and military applications.

MVP's strategic goal was to:

- Increase market share in Australia for pain relief into hospital emergency departments, for minor surgical procedures, for extreme sports, and more generally in pre hospital pain relief.
- Register the Penthrox inhaler in other countries and export it for use in overseas ambulance services, defence forces, hospitals and other first aid pre-hospital pain relief markets.
- Develop and expand the Medical Equipment and Veterinary equipment businesses in Australia and overseas organically and by acquisition.

This strategy has proceeded as planned. Sales commenced into New Zealand in 2004 evolving into a strong position in Ambulance.

A number of clinical trials have been conducted to build up a Regulatory Dossier to support Penthrox applications for new countries. MVP estimated that it had invested over $5.3m in building this evidence. In October 2013 MVP lodged a Marketing Authorisation Application in the UK, receiving a final assessment report in May 2015. This led to approvals being progressively received for the UK (Oct 2015), Ireland (Nov 2015), Belgium and France June 2016). Further country approvals have since been received making 38 countries in total currently, with many more applications being progressed.

However, a clinical trial program for Penthrox to seek approval for the USA was put on "clinical hold" by the FDA in July 2018, causing the share price to tumble over 20%. MVP has received a letter outlining the FDA's concerns and issues, and MVP hopes to meet with the FDA in Q1 next year to answer their questions, and hopefully resolve the issues and get the program restarted.

MVP sells Penthrox through international pharmaceutical distributors, and has announced several major deals, which generally included upfront payments, plus milestone payments for individual country approvals and/ or sales volumes. The key deals announced to date are as follows:

- UK & Ireland - Sept 2014 - Exclusive licencing and distribution agreement announced with Galen Pharmaceuticals. An upfront fee of A$650k was received.
- Europe - Sept 2015 – Exclusive licencing and distribution agreement announced with Mundipharma International, with upfront and milestone payments of up to US$54.5m (A$52.6m). The agreement covers 39 European countries, excluding UK, Ireland and Hungary. An upfront fee of A$10m was received in FY16.
- China, Thailand & Vietnam – Oct 2018 - Exclusive licencing and distribution agreement announced with Daiichi Sankyo of Japan, with upfront and milestone payments of up to US$32.5m (A$45.8m). An up-front fee of US$15m (A$21m) has been received. However MVP is required to fund the Chinese approval process of up to US$10m.

The payment of significant upfront fees by these 3 major pharmaceutical distribution companies appear to confirm the significant potential for Penthrox in these new regions.

Competitive Advantage / Barriers to entry

MVP's Penthrox product (a combination of a drug and the inhaler device) appears to fill an interesting niche in the pain relief market, offering a viable alternative to the traditional methods of Nitrous Oxide (laughing gas), Morphine and Fentanyl without many of the side effects to the patients, and time/cost/ security aspects. It also has practical benefits in being able to be self-administered by a conscious patient, and being small and portable, works well in an ambulance situation, or major car accident situation where a patient needs to be cut free, or in remote mining sites or military situations.

The methoxyflurane drug itself is a generic, so in theory can be copied. MVP's current manufacturing process is considered a "trade secret". But with current worldwide sales of only $8m and going to around $40m in 5 years on our estimates, it is still a small niche drug so might not attract any competition for quite some time.

MVP has recently developed a new more efficient production method, with assistance from the CSIRO, which apparently will allow a significant increase in MVP's production volume, at a significantly lower cost. This should provide added protection in that a new competitor would not have this advantage. MVP's strategy is to get the product well established in these new countries, and to secure good long term relationships with leading distributors, making it very hard or uneconomic for new competitors to come into the niche MVP is creating.

The inhaler device itself is not patented, but is trademarked. However MVP has recently filed a number of patent applications for its next generation of devices. Again because Penthrox is a combination product, new device patents could help protect the drug component.

Further, MVP state that the European approvals provide "Data Exclusivity rights" which work like a patent, and protects the product in market from competition for, for around 10 years.

MVP's growing regulatory dossier of clinical and non-clinical trial data, and 30 year history with 5-6m doses sold to date is also another formidable barrier.

Benefits to Medical Professionals

- Minimal waiting time before a painful procedure can be performed (3 minutes) and rapid pain relief when a patient is treated for acute pain, trauma, and minor surgical procedures.
- Medical professionals can perform a procedure/attend to an injury whilst the patient is self-administering with minimal supervision needed.
- Fastest time to analgesia and effective at calming patients before procedures; makes patients more compliant and cooperative during treatments/procedures. No known drug to drug interaction. Patients can drive themselves home and go back to work after 30 minutes.
- Easy to store in a range of clinical settings (hospital ER, ambulance, GP/specialist consulting rooms, hospital departments, military unit, etc).
- Addiction and the use of narcotics is increasingly problematic. Penthrox is non- narcotic and non-addictive, making it the better solution for medical professionals.

Source: MVP presentation to Jeffries US Healthcare conference 8/6/17

Benefits of using Penthrox over intravenous Opiates/ Morphine

- Penthrox does not affect vital signs; no clinical depression of respiration or circulation.
- Penthrox can be used on children, Morphine often cannot.
- Penthrox is not a narcotic, nor is it an opioid or drug of addiction.
- Penthrox has less severe side effects.
- Penthrox is non-invasive – no needles.
- Penthrox has a quicker onset to pain relief, improves time to analgesia.
- Penthrox can be used by a wider community of health professionals including first aiders and volunteers.
- Morphine has considerable, expensive and complex administration and monitoring protocols during its use and for a significant time during recovery eg 2 staff required access the opiods.
- After using Penthrox there is no long observation period needed before patients can go home (possibly drive themselves home after 30 minutes).
- Penthrox does not require complicated storage and use protocols (is not a controlled medicine in Australia).
- Penthrox can be disposed of easily and safely.

Benefits of using Penthrox over Nitrous Oxide

- Penthrox does not affect vital signs; no clinical depression of respiration or circulation.
- Penthrox is self-administered and easy for patient to use.
- Penthrox is compact and can be used in any location or situation.
- Penthrox does not carry any risk of overdose.
- Single use device ensures no cleaning or cross contamination.
- Medical professionals can perform a procedure / attend to an injury almost immediately whilst the patient is self-administering with minimal supervision.
- Penthrox pain offset ranges from 3-5 minutes up to 20 minutes.
- Penthrox is easy and stable to store.
- After using Penthrox there is no long observation period needed, as patients can drive themselves home and go back to work after 30 minutes.

Source: MVP presentation to USA Jeffries Healthcare Conference, 8/6/17.

Penthrox – Modelling the market potential

We have modelled the potential global expansion of Penthrox for each country listed in MVP's funnel diagram in the FY18 Annual Report and other presentations. We have assigned each country a subjective "country type" rating, and assumed a different market penetration and price level for the three types. This enables us to model an estimate for the potential peak number of units possible (per annum), and peak annual revenues.

Australia is MVP's most mature and established market. It is a well developed western country with 90% of the population living in city and metropolitan areas, and a high quality advanced hospital and ambulance network, and decent funding levels to enable payment for pain treatment. So we assign Australia a "Type 1" rating. MVP currently sells around 300,000 doses pa in Australia, which is about a 1.2% penetration of the total population. We have conservatively assumed a wholesale price to MVP of A$15 per unit for type 1 countries; and A$10 per unit for less advanced type 2 and type 3 countries.

Penthrox - Global Expansion Table	Approval Date (approx)	Launch Date	Population (millions)	Country Type 1 = Advanced 2= Developing 3= Emerging	Est Peak Penetration 1.5% 1.0% 0.1%	Projected Peak Units	Est Peak Rev (A$m)
Approved & Launched							
Australia (trauma + surgical)	1975	1975	24.8	1	1.5%	371,580	6.7
New Zealand (trauma + surgical)	2002	2004	4.8	1	1.5%	71,250	1.3
Moldova	2008	2009	4.0	3	0.1%	4,041	0.04
Guatemala	2010		17.2	3	0.1%	17,245	0.2
South Africa (trauma + surgical)	Jun-14	Oct-14	57.4	3	0.1%	57,398	0.6
UK (and Ireland)	Oct-15	Jan-16	66.6	1	1.5%	998,610	15.0
Ireland	Nov-15	Nov-15	4.8	1	1.5%	72,060	1.1
Singapore (trauma + surgical)	Sep-15	FY16	5.8	2	1.0%	57,920	0.6
France	Jun-16	Feb-17	65.2	1	1.5%	978,495	14.7
United Arab Emirates	Sep-16	Prior to app	9.5	1	1.5%	143,130	2.1
Taiwan	Dec-16	FY17	23.7	2	1.0%	236,940	2.4
Belgium	2017	Mar-17	11.5	1	1.5%	172,485	2.6
Subtotal - to 2017	**12**		**295.3**		**1.1%**	**3,181,154**	**47.2**
Austria	Jan-18	May-18	8.8	1	1.5%	131,280	2.0
Denmark	Jan-18	May-18	5.8	1	1.5%	86,310	1.3
Finland	Apr-18	May-18	5.5	1	1.5%	83,145	1.2
Germany	Apr-18	launched	82.3	1	1.5%	1,234,395	18.5
Norway	Mar-18	May-18	5.4	1	1.5%	80,295	1.2
Poland	Mar-18	May-18	38.1	2	1.0%	381,050	3.8
Slovac Republic	Jan-18	May-18	5.5	2	1.0%	54,500	0.5
Sweden	Mar-18	May-18	10.0	1	1.5%	149,745	2.2
Subtotal - 2018 Launches to date	**8**		**161.2**			**2,200,720**	**30.8**
Subtotal (Actual countries launched)	**20**		**456.6**			**5,381,874**	**78.0**
2018-19 Launches still to come							
Bulgaria	May-18		7.0	2	1.0%	70,370	0.7
Canada	Apr-18		37.0	1	1.5%	554,310	8.3
Croatia	Mar-18		4.2	2	1.0%	41,650	0.4
Cyprus	May-18		1.2	2	1.0%	11,890	0.1
Czech Republic	Jul-18		10.6	2	1.0%	106,250	1.1
Estonia	Feb-18		1.3	2	1.0%	13,070	0.1
Hong Kong (trauma + surgical)	Oct-18		7.4	2	1.0%	74,290	0.7
Iceland	Jan-18		0.3	1	1.5%	5,070	0.1
Italy	Jul-18		59.3	1	1.5%	889,365	13.3
Latvia	Feb-18		1.9	2	1.0%	19,300	0.2
Lithuania	Dec-17		2.9	2	1.0%	28,760	0.3
Mexico (trauma + surgical)	Oct-17		130.8	2	1.0%	1,307,590	13.1
Portugal	Jun-18		10.3	2	1.0%	102,910	1.0
Romania	May-18		19.6	3	0.1%	19,581	0.2
Saudi Arabia	Oct-18		33.6	2	1.0%	335,540	3.4
Slovenia	May-18		2.1	2	1.0%	20,810	0.2
Spain	Jul-18		46.4	2	1.0%	463,970	4.6
Switzerland	Jun-18		8.5	1	1.5%	128,160	1.9
Subtotal - FY19 launches to come (to d	**18**		**384.3**		**1.1%**	**4,192,886**	**49.8**
Total Countries approved in to date	**38**		**840.9**		**1.1%**	**9,574,760**	**127.8**

Source: Phillip Capital estimates

There is a bit more scientific theory behind our assumed three levels of market penetration, of 1.5% / 1.0% and 0.1%. MVP management has discussed the concept of a 30/ 30 /30 rule of thumb, being that approximately 30% of the population attend an Accident & Emergency department each year (verified by table below), that 30% of those patients experience severe pain (reasonable based on other sources we have read), and that about 30% of those would be Penthrox's target market. Multiplying out 30% x 30% x 30% produces a possible penetration rate per capita of 2.7%.

But we think this is way too optimistic, especially for Type 2 and Type 3 countries with less access to hospitals, and much lower ability to pay.

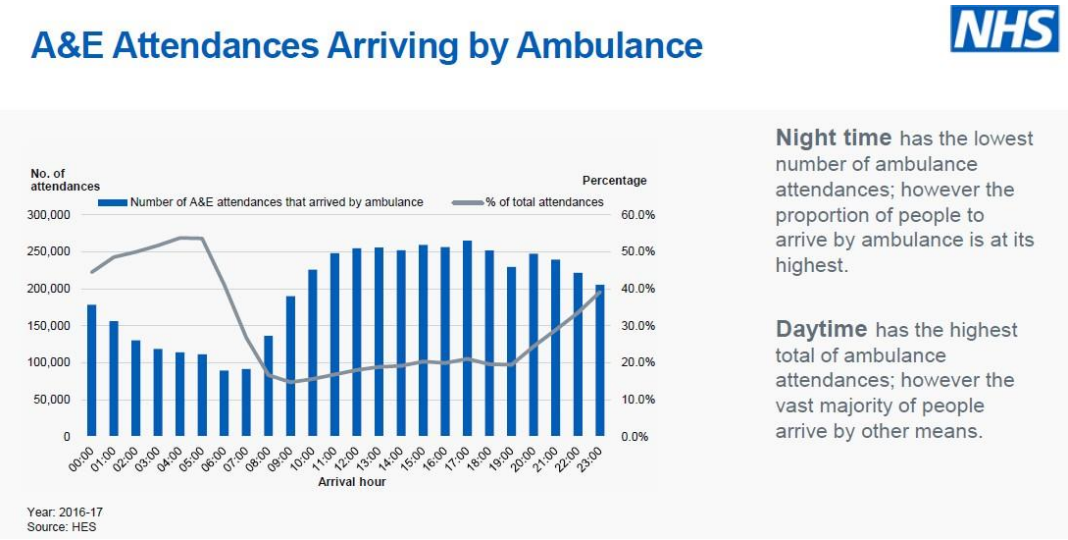
This calculation is also highly sensitive. A slightly more conservative set of assumptions of say 25%/ 25% / 25% produces a penetration rate of 1.56%, which we round down to our 1.5% assumption for Type 1 countries. The Australian penetration rate of 1.2% after 30 years shows how hard it can be.

For Type 3 countries that might have a few western standard cities and metropolitan areas, and often a vast and dispersed population, with people having little access to hospitals, we use 10% / 10% / 10% which produces a penetration rate of just 0.1%. Penthrox sales into these countries would probably be applicable only for the major hospitals, ambulances, and dentists in the major cities.

Accident & Emergency Dept stats	USA	UK	Australia
No. of Hospital & Emergency visits pa (m)	136.3	23.6	7.5
Population (m)	326.8	66.6	24.8
%	42%	35%	30%
No. of UK patients arriving by Ambulance (m)		4.7	
% of attendances		23%	
Source: US - Beckers Hospital Review 7/10/16; UK: NHS statistics, facts and figures 14/7/17 for 2016/17;			
Aust: Australian Government - Australian Institute of Health and Welfare - Emergency Dept Care 2015-16			

Other points of interest:

- Average time spent waiting in the ED (Emergency Dept) before seeing a physician, nurse, or assistant was 24 minutes, per the above US report.
- Average time patients with broken bones wait for pain medication after arriving in ED: 54 minutes.
- In the UK, about 23% of A&E patients arrive by Ambulance (chart below), demonstrating the importance of the ambulance sector, where MVP is very strong in Australia and New Zealand (Source: Hospital Accident & Emergency Activity 2016-17, NHS, 17/10/17).



MVP had pharmaceutical product sales in FY18 of $8.1m (plus a further $2.2m in amortised upfront and milestone income = Segment revenue of $10.2m). This was mainly from Australia & New Zealand, with addressable population of 30m people.

New markets such as the UK & Ireland are still in the early ramp up phase, with revenue of under $0.5m in FY18. We see potential for the UK/ Ireland to get to $16m+ per annum in coming years based on the Australian experience (30 years, & still growing modestly) and NZ experience (14 years).

Our modelling assumes it takes 12 years to achieve peak penetration. Some commentators think full penetration can be achieved in 5 years, but based on the UK evidence after 2 years, we think that is unrealistic. We assume a gradual build up towards peak potential, starting at 1.5% of peak in year 1, 2.5% in year 2, 5.0% in year 3, 10% in year 4, 20% in year 5, 30% in year 6 etc. Investors should look carefully at the rate of progression in the UK and France for evidence that MVP's distribution partners are achieving faster growth rates.

Penthrox has now been approved for sale in 38 countries, with an addressable population of 841m people and a potential volume of 9.6m units per annum (at peak penetration), and $128m estimated sales value (see table below).

However MVP has only launched into 20 of those 38 countries so far, including 8 launches so far in 2018. Another 18 launches expected during FY19. So its early days.

There are another 52 countries on MVP's target list to seek approvals (including Canada, China, the USA), with a combined addressable population of 3.3 billion, and potential volume of 10.9m units and $135m of annual revenue. Some of these countries may never eventuate, but this does indicate significant upside potential.

Penthrox - Global Potential Table	Countries	Population (millions)	Est Peak Penetration	Projected Peak Units	Est Peak Rev (A$m)
Approved & Launched	20	457	1.2%	5,381,874	78
Approved but not yet launched	18	384	1.1%	4,192,886	50
Current	**38**	**841**	**1.1%**	**9,574,760**	**128**
Still to come	52	3,289	0.3%	10,908,069	135
Potential Countries on MVP's list	**90**	**4,130**	**0.5%**	**20,482,829**	**263**
Source: Phillip Capital estimates					

Country Reviews

We review MVP's progress in a selection of countries below.

New Zealand

Sales commenced into New Zealand in 2004, and have built up steadily since. In June 2017, the NZ ambulance service decided to discontinue nitrous oxide (Etonox, or "laughing gas") in all ambulances, to be replaced by Penthrox as the only inhaled analgesic administered. The St John Ambulance Service in NZ has more than 600 operational vehicles and 205 ambulance stations. Subsequently, Penthrox NZ sales increased by 52% in FY18. We estimate NZ sales are around A$1.0m per annum. After 14 years, we regard this market as fairly mature.

Douglas Pharma is MVP's distribution partner for NZ.

UK & Ireland

In October 2013 MVP lodged its Regulatory Dossier and marketing approval application with the MHRA (Medicines and Healthcare Products Regulatory Agency) in the UK. Once approved, Penthrox would be able to be sold in the UK, Ireland, France and Belgium.

In September 2014 MVP announced an exclusive licensing and distribution agreement for the UK and Ireland with Galen Pharmaceuticals. Galen paid an upfront fee of A$650k upon signing, plus further payments upon marketing approval (A$950k (GBP $450k) received October 2015) and sales milestones. Galen estimated that the UK emergency market is 5 times that of the Australian market. (Based on Australia at an estimated 300,000 annual units, this would imply the UK could get to 1.5m annual units or $22.5m based on our A$15 per unit tier 1 country assumptions (We have $15m as our peak sales forecast).

Galen is a leading UK specialty pharmaceutical sales and marketing company with a significant presence in the UK and Irish markets. Galen is part of the Almac Group which has in excess of 3,000 employees worldwide, and is headquartered in Northern Ireland.

MVP received approval for Penthrox for the UK in October 2015, with the sales launch in November 2015 for Ireland and the UK in January 2016.

After 3 years, Penthrox is now sold into 436 UK & Ireland customers, including 125 hospitals. MVP has a target of 200+ hospitals (we note there is a list of 534 hospitals on Wikipedia for the UK alone; Scotland, Wales and Northern Ireland would be on top of this).

In Ireland, MVP stated that nearly all hospitals and ambulance services are using Penthrox (2017 AGM statement).

In the UK ambulance sector, Penthrox was recommended for use in all ambulances by JRCALC (Joint Royal Colleges Ambulance Liaison Committee) in Sep 2017. We understand that Penthrox is now being used by 3 of the 13 UK ambulance trusts, with more likely to follow. Each authority has autonomy over their protocols for pain relief.

We estimate UK/ Ireland sales were under $0.5m in FY18. So still considerable upside (eg compared to our estimated Australian Penthrox sales of around $5.5m pa, and with the UK population being nearly 3 times higher). We forecast peak sales of $16m for the UK and Ireland combined.

Europe

In September 2015 MVP announced an exclusive licensing and distribution agreement for 39 countries in Europe, with Mundipharma International Corp (includes all the 28 EU countries, but excludes UK, Ireland & Hungary).

- Mundipharma to pay MVP upfront and milestone payments of up to US$54.5m (A$76m)
- including US$7m (A$10m) on signing (received Sep 2015);
- US$3m (A$4.2m) on receiving marketing approvals for Belgium and France (achieved June 2016);
- US$7.0m (A$10m) upon receiving first reimbursed sales in France (achieved Feb 2017, US$2m / A$2.6m received), Germany (US2m), Italy (US$2m) and Spain (US$1m) still to come, Germany imminent);
- and up to US$37.5m (A$52m) on achievement of certain sales based milestones. (Estimated NPV $17m after tax, assuming this is achieved in year 6, and assuming an 80% ebitda margin).

Mundipharma is a network of independent but associated private companies, with a presence in 51 countries and more than 7,800 employees. The group specialises in the areras of pain management, oncology, respiratory and inflammatory conditions.

Dec 2017 – MHRA (The Medicine and Healthcare products Regulatory Agency) approves Penthrox in another 22 European countries (already in the UK, Ireland, Belgium and France). The latest countries are: Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Iceland, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Slovakia, Spain and Sweden. MVP now moves into the National Phase, where each countries' marketing approval are expected to be issued separately over coming months.

Jan 2018 – Penthrox approved in Slovakia, Austria, Denmark and Iceland. CEO says "there are no other drugs like Penthrox. The opportunities for Penthrox to treat patients with moderate to severe pain without the need to use dangerous opioids should drive our rapid expansion globally".

Feb 2018 – Penthrox approved in Latvia and Estonia.

March 2018 – Penthrox approved in Sweden, Norway, Poland and Croatia

April 2018 – Penthrox approved in Germany (population 83m), and Finland.

May 2018 – Penthrox approved for Romania, Bulgaria, Slovenia and Cyprus.

May 2018 – First orders received for Sweden, Norway, Austria, Denmark, Finland, Slovakia and Poland.

Jun 2018 – Penthrox approved for Portugal and Switzerland (NB. Switzerland not part of the EU, so had its own independent assessment of Penthrox).

July 2018 – Penthrox approved for Italy and Czech Republic.

July 2018 – Penthrox approved in Spain.

France

As above, France launched in Feb 2017 so is only 1.5 years into its development path. The latest position is:

- Penthrox now included on 121 hospital formularies (approved lists), and targeting 350. Also, 250 applications already submitted. (MVP said the hospital approval process is much faster in France than in the UK).
- 272 customers (v 166 a year ago, +64%) per AGM Update (29/10/18)
- Orders from the distributor – we understand there were 2 orders in FY17, but none in FY18 or so far in FY19. In market sales were made from the distributors stock.
- Ambulance sales are also happening.
- We forecast France to grow to be a $15m pa market at peak, in 12 years.

Russia

April 2017 – Penthrox licencing deal agreed for Russia, with JSC Lancet. Lancet will pay for the substantial costs of the clinical trials, registration and approval of Penthrox in Russia. The agreement includes milestone payments of up to A$2.3m, including a small upfront payment upon signing. Lancet estimates that over time, Penthrox sales could be 2m units per annum in Russia, a country of 143m people.

We have peak units of 144,000, so we could be too low.

South Africa

Sales commenced in FY15, but we understand have stalled as Pethrox is still classified as a restricted drug there. MVP and its partner are trying to get it "down-scheduled".

Asia - Singapore

September 2015, Penthrox received approval for trauma and associated pain, and for surgical procedures in adults. MVP used the results of a Singapore Ambulance trial of Penthrox Vs Tramadol, to demonstrate that Penthrox was preferred in these settings. MVP's distribution partner there is Link Healthcare.

Sales have commenced in FY16, but fell in FY18.

South Korea

Sep 2016 - Exclusive Penthrox licencing deal for Korea, with BL&H Ltd. BL&H will manage the registration, reimbursement and approval process for Penthrox in Korea.

- The deal includes upfront and milestone payments of A$1.2m to MVP.

Taiwan

Dec 2016 – Penthrox approved for sale in Taiwan, for trauma pain and surgical procedures. Taiwan has 23m people, 1.6m patients admitted to hospitals with trauma injuries, and 10.3m minor surgical procedures each year.

An initial order was received in FY17, but none in FY18.

Hong Kong

Oct 2018 – Penthrox granted regulatory approval in Hong Kong, for both trauma pain and surgical procedures. MVP's distribution partner for Hong Kong is a subsidiary of Clinigen Group Plc.

MVP is awaiting marketing approval for sales to begin.

China, Thailand & Vietnam

October 2018 – MVP signs exclusive distribution and licence agreement for China, Thailand and Vietnam with Daiichi Sankyo of Japan.

- DS will pay MVP up to US$32.5m (A$45.8m)
- including US$15m up front (A$21m - received)
- and sales based milestones for the balance of $17.5m (A$24.6m).
- We understand that the upfront amount has been received, and is non-refundable. However, MVP is required to fund the Chinese approval process of up to US$10m, (A$13.7m) and that MVP will own the IP generated from the program.
- This registration process should assist the Thailand and Vietnam applications, which DS will pay for.
- MVP said it believes that acute pain in trauma and minor surgical procedures is under-treated in China. MVP hopes to launch within 3 years.

Daiichi Sankyo (Tokyo Stock Exchange code: 4568.T) is the second largest pharmaceutical company in Japan with FY18 sales of A$11.7bn and a market cap of US$25.1bn.

MVP and Daiichi Sankyo will contract EPS Holdings Inc (Tokyo Stock Exchange: 4282, Market cap US$805m), Japan's leading clinical and regulatory service provider to get Penthrox approved for sale in China.

Middle East

April 2016 - Signs exclusive Middle East distribution deal with Pharma Solutions LLC, for Penthrox in the UAE, Jordan, Iraq, Oman and Bahrain.

- An initial sales order of $240k was also received for the UAE.

Oct 2018 – Penthrox granted marketing approval for the Kingdom of Saudi Arabia. MVP said it has been working with distribution partner Yahmaa Medical Company since 2014 on this approval. Yahmaa said there are more than 16.7m medical emergency visits to hospitals, medical centres and day clinics annually, and more than 5.5m of these receive non-opioid pain relief such as Voltaren (diclofenac) and paracetamol.

We understand that Penthrox was selling well in the Middle East (eg in Qatar) even before approvals were received, so this is already an established market for MVP. We understand sales are already over $0.5m in this region. Encouraging.

Canada

Sep 2016 - Signs exclusive licensing and distribution agreement with Purdue Pharma for Penthrox in Canada, subject to getting regulatory approval. Purdue is an independent associate of Mundipharma, MVP's European partner.

- Purdue will pay MVP up to CAD$3m (A$3m) through a combination of upfront, milestone and success based payments.
- Canada has a population of approx. 36 million. MVP estimates sales over time to be up to 1.0m units per annum. (Vs our modelling of 554,000 peak units).
- In June 2017, a CAD$250k milestone was received upon the Canadian regulator accepting MVP's application and dossier. $1.5m in milestones has now been received to date.
- April 2018 - Penthrox approved in Canada.
- We understand there were initial sales in FY18, ahead of the expected launch, and a repeat order has already been received and filled in FY19 which is a good sign.

Mexico

October 2017 – Penthrox approved in Mexico, for trauma pain and surgical procedures.

- Distribution partner Probiomed estimates that in time, Penthrox could sell 800,000 doses per annum in the trauma pain hospital setting. (Vs our modelling of 1.3m – we might be too high. We estimate it could become a $13m pa market at peak penetration).
- MVP said the surgical procedures market was harder to estimate, but could be larger than for Trauma.
- MVP is targeting a launch in FY19 but with a new partner.

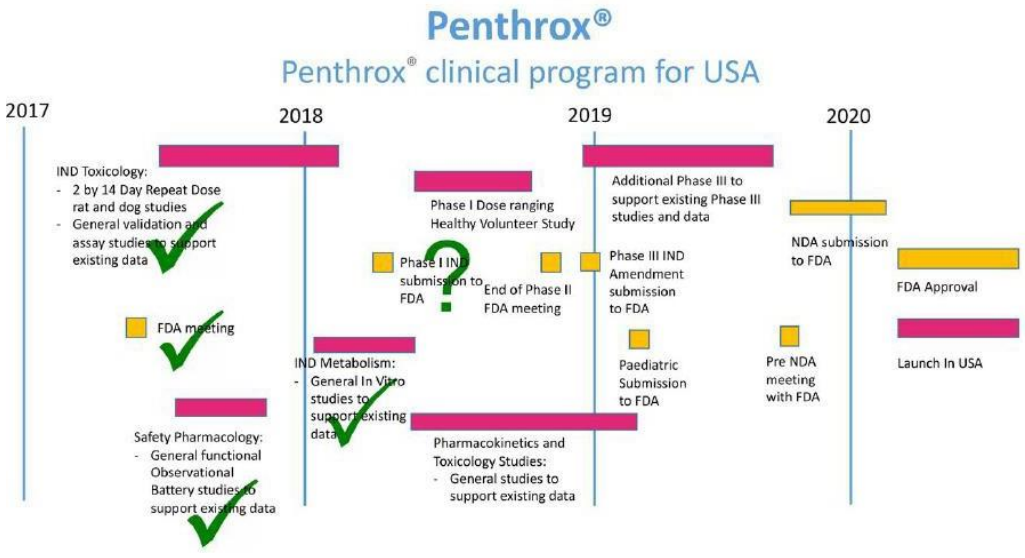
USA

Aug 2016 – USA – Penthrox update. MVP announced feedback from the FDA of the steps and data required to get approval for the USA. Among other requirements, MVP is to undertake a second Phase 3 Pivotal Clinical Trial in the USA for "Acute Trauma Pain", and to include an appropriate mix of ethnically diversified patients. MVP has already completed two Phase 3 trials elsewhere, but always expected that the FDA would require more work. MVP has published a roadmap of the expected path to achieve US approval, and expected the program would cost around US$10-15m (A$14-21m).

The USA was considered a particularly attractive target market for Penthrox, because of strong concerns in the industry and government over the levels of opioid addictions and mis-use of competing pain killing drugs.

On the 25/7/18, MVP's US clinical program for Penthrox to be approved there was put on "Clinical Hold" by the FDA, pending a letter outlining outstanding issues and concerns. MVP's share price fell about 20% on the day on this news.

MVP is confident it can answer the FDA questions, and hopes to meet again with the FDA in 2019 Q1 to address the issues and rework the program. Given that methoxyflurane had been delisted years ago in the US, and had some toxicity problems when used as a general anaesthetic (at much higher doses than the 3ml and 1.5ml used in the Penthrox inhaler), this set back is not totally surprising. We show below MVP's earlier estimate of the path to approval, which is now subject to change and / or delay



Medical Devices segment

Background – This segment is engaged in the design and sale of medical devices that improve respiratory care. These include a range of anti-static valved holding chambers ("Space Chambers") for the delivery of asthma and COPD medications, "Breath Alert" breathing flow meters, EZ-fit face masks, and finger-tip pulse oximeters for measuring oxygen levels in the blood. These comprise 90% of sales. MVP also sells a range of oxygen cylinder related rescue and resuscitation products, and defibrillators (10% of sales).

MVP is the market leader in Australia with a claimed 55%+ market share.

Sales are approximately 50% Australia, and 50% international, with sales to around 20 countries in North America, Europe, and Asia.

Recent Developments:

- Jan 2016 – FDA approved new range of anti-static respiratory devices for the USA.
- Signs non-exclusive distribution deals with AmerisourceBergen (May 2016), Cardinal Health (Aug 2016) and McKesson Corp (Nov 2016), all leading healthcare supply chain companies in the US. MVP said that through these 3 distribution companies, it could now wholesale into virtually every pharmacy and hospital in the USA.
- Apr 2017 – Announced core ranging deal with WalMart (4,600 pharmacies) for at least two products into all 4,600 stores and a further 2 products into at least 2,100 stores in the initial roll out. First orders were placed via distributor McKessons.

- Apr 2017 – Similar core ranging deal with Kmart pharmacies for at least 2 products into all 1,000 stores, and another 2 products to be available on request, via distributor Cardinal Health.
- Apr 2017 – MVP respiratory devices also now available in in Costco (500 stores in the USA), Price Chopper (88 stores), and Independent Pharmacy Co-Op which supplies 3,000 pharmacies.
- Aug 2017 – Supply deal for Sam's Club (Walmart) for 626 pharmacies.
- Feb 2018 – Supply deal for 2,000 of Walgreen's 9,000 pharmacies in the USA for 3 MVP devices.
- Oct 2018 – MVP said it was now represented in almost 15,000 of a total of 67,000 pharmacies in the USA, and it expects to have 40% market penetration by the end of 2018 (implies 26,800 pharmacies, +80% from current).
- MVP believes there are 20 million space chamber devices sold each year in the US.

Competitive Advantage

MVP believes it has a greater than 55% market share in Australia in Spacers, due to its product design features. The range was launched in 2011 with MVP's patented Cross Valve technology, which ensures very low resistance during inhalation and exhalation, while maximising the dose of medication available to the patient's lungs.

In the US, received FDA approval in 2016 to sell its range of Anti-Static Space Chamber devices in the US and elsewhere. MVP also states it has a significant price advantage.

Review of Financial Results

Medical Devices segment Years ended June $m	FY16	FY17	FY18	FY19e	FY20e	FY21e
Sales	4.9	6.6	6.5	8.7	10.5	11.5
Sales growth	21%	34%	-3%	35%	20%	10%
Ebitda	0.6	0.7	0.4	1.1	1.4	1.7
Ebitda growth	118%	21%	-41%	160%	30%	22%
Ebitda margin	11.9%	10.7%	6.5%	12.5%	13.5%	15.0%
Source: Phillip Capital estimates.						

FY17 sales were up strongly (+34%) in Australia, NZ, UK Europe and the USA, and up about 12% adjusting for the full year effect the Breath-A-Tech acquisition in Feb 2016. New distribution deals with McKesson, AmerisourceBergen and Cardinal Health, and range deals with Walmart, Kmart, Costco, Price Chopper, Sam's Club and Independent Pharmacy CoOp saw MVP's "Space Chamber Plus" range of devices and masks now found in over 11,000 pharmacies in the USA.

Ebitda was up by a lower amount (+21%) in FY17 as MVP incurred several promotional and start-up costs for the new customers, which were not expected to repeat.

In FY18, Sales fell in Australia by -6% as there were no new product launches (v 6 in FY17). However sales were up 15% in the USA and MVP said it was well on the way to establishing itself as a major supplier in that market. Sales were up 35% in the UK & Europe. Ebitda was down as MVP added costs for further global expansion.

Forecasts

Q1 sales Respiratory Device revenue was up 58% per the AGM statement, and "in market sales" of devices in the USA were up 98%, so this division looks set for a strong year.

However we expect the rescue and resuscitation equipment would not grow as strongly, so we have forecast a more modest 35% growth for the FY19. MVP's sales to distributors can also be lumpy, and can be higher or lower than "in market" sales data provided to MVP by its distributors.

If FY19 is a banner year, we should also see a strong improvement in margins, even after the distributor's costs and margin.

Veterinary Products - Segment

This segment (4% of sales) is engaged in the sale of veterinary products within Australia, Europe and the United States. The Company offers a range of products in the areas of pain management, and asthma and resuscitation. MVP and its predecessor MDA have been in this business for over 30 years.

Products sold include:

- Anaesthetic machines (9 models in the product catalogue)
- Oxygen cylinder regulators
- Breathing monitors
- CO2 Absorber devices
- Animal asthma chambers/ spacers, canine and equine masks
- Small devices - Torniquets, resuscitators, oxygen tubing and connections

Large and Small Animal Anaesthetic Machine (LANA)

Code: LN-LANA-00

The LANA is an interchangeable out-of-circuit set up for both large and small animals with a 180° rotation mechanism. It incorporates a clear carbon dioxide (CO_2) soda lime canister with a 4.2 kg capacity, which can be filled and emptied in seconds, and a separate KAB™ CO_2 Absorber to accommodate small animals.

Review of Financial Results

Vet Equipment segment Years ended June $m	FY16	FY17	FY18	FY19e	FY20e	FY21e
Sales	0.5	0.7	0.8	0.8	0.9	0.9
Sales growth	11%	40%	11%	10%	5%	5%
Ebitda	0.2	0.2	0.3	0.3	0.3	0.3
Ebitda growth	-34%	31%	6%	5%	5%	5%
Ebitda margin	38.4%	35.9%	34.3%	32.7%	32.7%	32.7%
Source: Phillip Capital estimates.						

Sales in FY16 and FY17 were strong due to new orders from China and South East Asia. Sales in FY18 were up 11% due to a new deal with one of the largest US veterinary device companies.

Segment Forecasts

We have forecast 5% pa Ebitda growth, which looks conservative given the new customer wins. A lower A$ should also be beneficial.

PhillipCapital Estimates

Medical Developments (MVP:$4.32)

PROFIT AND LOSS ($m)

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
Sales revenue	18.3	17.5	23.4	28.6	34.1
EBITDA	3.8	2.2	4.0	5.8	8.3
Depreciation	1.3	1.8	2.3	3.2	4.0
EBITA	**2.5**	**0.4**	**1.7**	**2.6**	**4.3**
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0
EBIT	**2.5**	**0.4**	**1.7**	**2.6**	**4.3**
Interest exp (income)	-0.0	0.1	-0.4	-0.4	0.2
Pre-tax profit	**2.5**	**0.3**	**2.1**	**3.0**	**4.1**
Tax expense	0.6	0.1	0.6	0.8	1.1
Tax rate (%)	*26.1%*	*19.3%*	*27.5%*	*27.5%*	*27.5%*
Minorities/pref divs	0.0	0.0	0.0	0.0	0.0
Equity accounted NPAT	0.0	0.0	0.0	0.0	0.0
NPAT	**1.8**	**0.2**	**1.5**	**2.2**	**3.0**
NPAT pre-g'will	**1.8**	**0.2**	**1.5**	**2.2**	**3.0**
Significant items	0.0	0.0	0.0	0.0	0.0
Reported NPAT	1.8	0.2	1.5	2.2	3.0

BALANCE SHEET ($m)

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
Cash	1.7	0.8	31.5	18.1	3.8
Receivables	5.2	4.3	5.7	7.0	8.4
Inventories	2.4	3.2	4.3	5.2	6.3
Other	0.5	0.5	0.5	0.5	0.5
Current assets	**9.9**	**8.7**	**42.0**	**30.8**	**18.9**
Net PPE	6.6	8.1	10.0	11.5	13.4
Investments	0.0	0.0	0.0	0.0	0.0
Intangibles	24.2	31.6	36.7	48.5	58.7
Other	1.1	1.1	5.9	7.3	8.7
Non-current assets	**31.9**	**40.8**	**52.7**	**67.3**	**80.8**
Total assets	**41.8**	**49.5**	**94.6**	**98.1**	**99.7**
Current payables	2.7	3.2	4.3	5.3	6.3
Debt	0.4	9.3	9.4	9.3	9.3
Provisions	0.7	0.6	0.8	0.9	1.1
Other	16.5	15.5	40.5	40.5	40.5
Total liabilities	**20.4**	**28.5**	**54.9**	**56.0**	**57.2**
Equity	15.0	16.1	40.4	40.4	40.4
Reserves	0.3	0.7	0.7	0.7	0.7
Retained profits	6.3	4.2	3.2	2.8	3.1
Minorities			0.0	0.0	0.0
Total s/h funds	**21.6**	**21.0**	**44.3**	**43.9**	**44.2**
Total funds emp.	**42.0**	**49.5**	**99.2**	**99.9**	**101.4**

CASHFLOW ($m)

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
EBIT	2.5	0.4	1.7	2.6	4.3
Net interest recd (paid)	-0.0	-0.1	0.4	0.4	-0.2
Dep'n and amort'n	1.3	1.8	2.3	3.2	4.0
Tax refund (Tax paid)	-4.3	0.0	-5.1	-0.8	-1.1
Upfronts & Milestones recd	7.4	1.0	25.0	2.8	0.0
(Inc)/dec in working cap	2.8	0.7	-1.4	-1.3	-1.4
Other	-5.5	-2.0	0.2	0.2	0.2
Operating cashflow	**4.0**	**1.8**	**23.1**	**7.1**	**5.8**
Investing activities					
Capital expenditure	-4.4	-2.1	-2.7	-2.8	-3.2
Intangibles (Capit Regn Cos	-4.3	-8.6	-6.6	-13.7	-12.8
Investments	0.0	0.0	0.0	0.0	0.0
Divestments	0.0	0.0	0.0	0.0	0.0
Financing activities					
Equity raised	2.0	0.4	24.3	0.0	0.0
Change in loans	-0.1	8.8	0.0	-0.0	-0.0
Dividends paid	-1.2	-1.2	-2.5	-2.6	-2.6
Other non-op flows	-0.0	-0.0	-4.9	-1.3	-1.4
Net chg in cash	**-4.0**	**-0.9**	**30.7**	**-13.4**	**-14.3**

LIQUIDITY AND LEVERAGE RATIOS

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
Net debt (Net cash) ($m)	-1.3	8.5	-22.1	-8.7	5.5
Net debt / equity (%)	**-5.8%**	**40.2%**	**-49.9%**	**-19.9%**	**12.5%**
Interest cover (x)	(614.8)	3.2	(4.2)	(6.5)	21.6

PROFITABILITY RATIOS

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
EBITDA / sales (%)	20.7%	12.7%	17.1%	20.3%	24.2%
EBITA / sales (%)	**13.4%**	**2.5%**	**7.2%**	**9.1%**	**12.6%**
Return on assets (%)	6.5%	1.0%	3.0%	3.6%	4.9%
Return on equity (%)	9.0%	1.1%	4.6%	4.9%	6.8%
Return on funds emp (%)	14.4%	1.8%	6.5%	9.0%	10.2%

GROWTH RATES (% over pcp)

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
Sales		-4.8%	33.8%	22.4%	19.4%
EBITDA		-41.4%	79.7%	45.3%	42.6%
EBITA		-82.1%	280.8%	54.4%	66.4%
Pre-tax profit		-87.8%	590.8%	43.9%	37.5%
NPAT pre-g'will		-86.6%	520.3%	43.9%	37.5%
EPS		-86.9%	464.1%	41.1%	37.5%

MULTIPLES AND PER SHARE DATA

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
EPS cents	3.1	0.4	2.3	3.3	4.5
DPS	4.0	4.0	4.0	4.0	4.0
Franking	100%	100%	100%	100%	100%
Payout ratio	127%	971%	172%	122%	89%
CFPS	6.9	3.0	35.6	10.7	8.7
NTA	-0.04	-0.18	0.11	-0.07	-0.22
PER	137.6	1048.4	185.9	131.7	95.8
Div yield (%)	0.9%	0.9%	0.9%	0.9%	0.9%
P/CF	62.3	142.3	12.1	40.3	49.5
P/NTA	-98.5	-24.1	37.6	-62.4	-19.8
EV/EBITDA	66.8	118.8	65.2	47.2	34.8
EV/EBITA	103.1	598.8	155.1	105.6	66.8

WORKING CAPITAL RATIOS (% of sales)

Year ending Jun	17(a)	18(a)	19(e)	20(e)	21(e)
Current receivables	28.5%	24.6%	24.6%	24.6%	24.6%
Current inventory	13.2%	18.3%	18.3%	18.3%	18.3%
Current payables	14.9%	18.5%	18.5%	18.5%	18.5%
Current provisions	1.9%	2.0%	2.0%	2.0%	2.0%
Non-current provisions	2.1%	1.2%	1.2%	1.2%	1.2%

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Buy	Hold	Sell
>20%	20% – 5%	<5%

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