

In this edition...

The cash positions of 91 companies at September 30, 2007 are on display in this edition. That in itself is very useful, but what is more useful to investors is our associated calculation of a Survival Index figure for 85 of those companies. We spell out who is trouble in the funding stakes.

Acrux continues to impress, this time announcing a move into the transdermal nicotine smoking cessation product market.

We also report on good progress at NeuroDiscovery and frustrating times at Optiscan Imaging.

The editors

Companies covered: ACR, NDL, OIL

	Bioshares Portfolio
Year 1 (May '01 - May '02)	21.2%
Year 2 (May '02 - May '03)	-9.4%
Year 3 (May '03 - May '04)	70.0%
Year 4 (May '04 - May '05)	-16.3%
Year 5 (May '05 - May '06)	77.8%
Year 6 (May '06 - May '07)	17.3%
Year 7 (from 4 May '07)	-10.0%
Cumulative Gain	193%
Av Annual Gain (6 yrs)	26.8%

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Bioshares

9 November 2007
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Delivering independent investment research to investors on Australian biotech, pharma and healthcare companies.

September Quarter Cash Survival Analysis

A key analytical measure we present each quarter is the 'Survival Index' (SI) (see tables on the following pages). The index measures how many years those cash reserves will last, based on the company's recent spending patterns. It is limited because it does not account for companies that may increase spending in the next period of activity.

The index is derived for this quarter firstly by calculating the average of the last five quarters net operational cash flows, which is then annualised. This annualised figure is then divided into each company's cash assets as recorded at September 30, 2007.

As a rule of thumb, companies that present with an SI of less than one are likely to be raising funds to support their activities, or are in the process of doing so. A healthy SI is either two or more. Companies with SIs of less than 0.5 may be in positions of funding stress and should therefore be investigated cautiously by investors.

Getting better?

Are Australian listed biotech companies getting better at maintaining appropriate levels of working capital? The answer is marginally better, if compared to the same time a year ago and if a count of the number of companies that record a Survival Index of less than 1 is conducted. At the close of the September quarter, 2006, 42 companies posted an SI of less than 1, compared to 37 at September 30, 2007.

Weakness with Australian biotech

One weakness with Australian biotech companies is that by and large, they leave crucial fundraising activities to the last minute. Approximately half of the companies with less than six months cash at hand at September 30 subsequently raised funds, whereas four out of 19 companies with between six months and a year's cash gave notice of funding activities, post September 30, 2007.

A worthy contrast to the very tardy fundraising philosophies of many of the sector's biotech minnows was that proffered by Pharmaxis. At September 30, it was assessed as having 3 years worth of cash at hand but still managed raise cash (\$50 million) to continue to support and expand its business activities.

A first rule of investing in biotech

It is arguably a first rule of investing in biotech that companies have both sufficient funds at hand and a capability to address fundraising well ahead of when cash resources must be applied. Unfortunately, more than a handful of biotech company boards have been very slow to put funding priorities ahead of concerns about the often dilutionary effects associated with funding.

4.7B Reporting Companies – Cash Balances Sept. 30, 2007 Sorted by Survival Index

Code	Company	Cash End 30/09/07 (\$M)	Survival Index	Comments, significant events since 30/9/2007
1 AVS	Avastra	\$5.2	25.2	
2 HXL	Hexima	\$39.4	N 12.8	
3 CUV	Clinuvel Pharmaceuticals	\$60.0	7.5	
4 QRX	QRxPharma	\$43.5	N 7.1	
5 PAB	Patrys	\$24.9	N 6.6	
6 ACR	Acrux	\$37.6	6.5	
7 CST	Cellestis	\$11.7	6.3	
8 CXD	CathRx	\$27.8	5.2	
9 LBT	Labtech Systems	\$7.4	4.9	Net OCF adjusted net of licence receipt in FY07
10 HGN	Halcygen	\$13.9	N 4.8	
11 BPO	BioProspect	\$5.2	4.6	
12 AVX	Avexa	\$70.8	4.1	
13 FER	Fermiscan	\$22.6	CY 3.3	
14 PXS	Pharmaxis	\$67.4	3.0	Raised \$50M
15 HTW	Heartware	\$37.9	2.7	
16 NAN	Nanomics	\$28.7	N 2.6	
17 CBB	Cordlife	\$10.7	2.6	
18 NDL	NeuroDiscovery	\$3.6	2.4	Raised \$3.15M
19 SPL	Starpharma	\$11.3	2.3	
20 OBJ	OBJ	\$1.9	2.2	
21 UBI	Universal Biosensors	\$16.7	CY 2.2	Announced \$34M rights issue
22 ANP	Antisense Therap.	\$6.5	2.1	
23 XBL	Xceed Biotech	\$4.9	2.0	
24 KSX	KarmelSonix	\$5.6	2.0	
25 PYC	Phylogica	\$6.9	1.9	
26 BLT	Benitec	\$4.1	1.8	
27 VSG	Visiomed	\$1.9	1.7	Merging with CCE
28 ABI	Ambri	\$4.6	1.7	
29 ACL	Alchemia	\$22.1	1.7	
30 BNO	Bionomics	\$10.4	1.6	
31 BOD	BioMD	\$2.0	1.5	Options pgm raised \$1.2M
32 CCE	Clinical Cell Culture	\$11.6	1.5	Merging with VSG
33 BZI	Brainz	\$5.0	MY 1.5	
34 BPH	Biopharmica	\$1.7	1.5	
35 GBL	Genesis Biomedical	\$1.3	1.4	
36 SBP	Solbec Pharm.	\$2.4	1.4	
37 MGZ	Medigard	\$0.5	1.3	
38 PEP	Peplin	\$30.2	1.3	
39 SLT	Select Vaccines	\$2.2	CY 1.2	
40 RHT	Resonance Health	\$1.7	1.2	
41 ACG	Atcor	\$5.6	1.2	
42 MSB	Mesoblast	\$9.1	1.1	
43 BLS	Biolayer	\$1.1	1.1	
44 UCM	USCOM	\$3.6	1.1	
45 PBT	Prana Biotechnology	\$10.0	1.1	Placement \$8M
46 IMI	IM Medical	\$3.6	1.1	
47 CGS	Cogstate	\$1.5	1.0	
48 ICV	Incitive	\$1.2	1.0	Placement \$0.6M
49 HTX	Healthlinx	\$1.7	0.9	
50 SLA	Solagran	\$1.9	0.9	
51 AOS	Advanced Ocular Systems	\$1.0	0.8	Cash now \$1.4M
52 BOS	Biosignal	\$2.6	0.8	
53 ALT	Analytica	\$0.2	0.8	To raise max \$2.2M - has raised \$0.7M
54 STC	Stem Cell Sciences	\$10.4	MY 0.8	

4.7B Reporting Companies – Cash Balances Sept. 30, 2007 Sorted by Survival Index

Code	Company	Cash End 30/09/07 (\$M)	Survival Index	Comments, significant events since 30/9/2007
55 AOP	Apollo Life Sciences	\$6.5	0.8	
56 PSD	pSiVida	\$18.5	0.7	
57 MTY	Medical Therapies	\$1.6	0.6	
58 IMU	Imugene	\$0.9	0.6	
59 PLD	Portland Orthopaedics	\$3.2	0.6	
60 UNI	Unilife	\$4.4	0.6	
61 MAA	Medec	\$1.0	0.6	
62 GIA	Giaconda	\$1.3	0.5	
63 SHC	Sunshine Heart	\$4.9	0.5	To receive \$6M Tranch II by 15 Nov
64 CAU	Colltech	\$1.2	0.5	
65 DIA	Dia-B Tech	\$1.4	0.5	
66 VLA	Viralytics	\$1.4	0.5	
67 BDM	Biodiem	\$1.8	0.5	Placement \$7M (2 tranches)
68 SOM	Somnomed	\$1.4	0.4	
69 STI	Stirling Products	\$0.8	0.4	Completed \$3M placement; \$2.9M SPP u'way
70 TIS	Tissue Therapies	\$2.0	0.4	
71 OMI	Occup.& Medical Innov.	\$0.8	0.3	Placement \$0.25M
72 MVH	Medic Vision	\$1.1	0.3	
73 PXL	Proteome Systems	\$1.6	0.2	Placement \$5.25M
74 NLS	Narhex Life Sciences	\$0.9	0.2	
75 LCT	Living Cell	\$1.2	0.2	Raised \$2.2M, \$6.6M to follow
76 BNE	Bone Medical	\$0.6	0.2	
77 BIT	Biotron	\$0.7	0.2	Rec'd a \$0.47M grant
78 PCC	Probiomics	\$0.2	0.2	Issued \$0.6M Conv. Note
79 RBY	Rockeby Biomed	\$0.4	0.1	
80 ACU	Avantogen	\$0.4	0.1	
81 NEU	Neuren Pharmaceuticals	\$1.3	CY 0.1	Issued US\$3M Conv. Note
82 NAL	Norwood Abbey	\$0.4	0.1	Rights issue - raised \$3.3M
83 PRR	Prima Biomed	\$0.2	0.1	
84 PAA	Pharmaust	\$0.1	0.0	Rights issue - raised \$1.4M
85 RTL	RiTract	\$0.0	0.0	Suspended from trading
86 BRC	Brain Resource Corp	\$20.7	Not App.	
87 CTE	Cryosite	\$1.6	Not App.	
88 EMS	Eastland Medical Systems	\$1.6	Not App.	
89 GTG	Genetic Technologies	\$16.3	Not App.	
90 SRX	Sirtex Medical	\$10.3	Not App.	
91 SIE	Scigen	\$8.6	CY Not App.	

Legend:

Not App. : The SI calculation for these companies is not calculated due to the companies reporting positive operational cash flows.

CY: The SI calculation for these companies is based on the latest nine months figures, annualised.

MY: The SI calculation for these companies is based on the latest six months figures, annualised.

N: The SI calculation for these companies is based on the latest single quarter figures, annualised.

Small cap life science companies that are not required to comply with the 4.7B Rule include:

Agenix, Anadis, Biota, Circadian, Clovercorp, Compumedics, ChemGenex Pharmaceuticals, Cyclopharm, Cytotopia, Eiffel Technologies, Ellex Medical Lasers, Genepharma, IDT Australia, ITL Corp, Life Therapeutics, Metabolic Pharmaceuticals, Medical Developments International, Novogen, Optiscan Imaging, Panbio, Progen Pharmaceuticals, Polartechnics, Phosphagenics, Peptech, Sirtex Medical, Ventracor and Virax Holdings - (27 companies).

Stock Updates

NeuroDiscovery Progressing Well

NeuroDiscovery (NDL: 16 cents) has been progressing well with its drug development programs and also its preclinical services business. The company will shortly have two clinical drug programs in the area of neuropathic pain and its contract services business, which provides electrophysiology testing, increased revenue in the financial year just past by 45% on an annualised basis to \$1.7 million.

Its subsidiary service business, called **NeuroSolutions** and which is based in the UK, generated sales of \$636,000 in the September quarter with a gross profit of \$377,000. The business is on track to increase revenue to \$2.5 million this year and provides a solid base as an investment in this stock. It recently appointed **TetraQ** in Queensland to market the company's services in Australia.

NeuroDiscovery is capitalised at \$9.1 million with \$3.6 million in cash. The underlying service business alone arguably substantiates the current market capitalization of the parent company with strong demand expected to continue.

Lead drug development program

The company's lead development program is with NSL-043, co-owned with Japanese biotech company Sosei, is currently in its second Phase I safety trial. It's expected this compound will move into Phase II trials for the treatment of neuropathic pain mid next year with results expected in early 2009. This will be a major development milestone for the company. If the Phase II results are positive, it will warrant a major revaluation of the stock. NSL-043 had previously been tested in a Phase III trial for different indication (as an anti-inflammatory) but failed because of lack of efficacy. The NeuroSolutions team, which is well respected in the industry for assessing drug candidates for treatment of neuropathic pain, generated positive results in a number of preclinical models of pain with the compound before progressing with development. .

2nd drug development program

The company's second program, of which it owns 100%, is expected to begin testing in two Phase II trials as a potential topical treatment for two different dental applications. The first is for the treatment of gum disease, where the ability of the drug to treat inflammation and reduce infection in the gum will be tested, presumably as well as the effect it has on reducing associated pain.

The second trial will assess the ability of the compound to reduce pain associated with wisdom tooth extraction. The compound, NSL-101, will be applied both before and after extraction and will be compared with a placebo. The duration and level of effect will be of interest to monitor, with the aim to deliver a longer lasting effect that other topical analgesics such as the highly successful Lidocaine.

Each trial will involve 50 patients. Both trials are due to begin this quarter with results expected early 2008. If the results are positive, the company will seek to license the compound to a multinational group as an over-the-counter product. NSL-101 is derived from a

plant in Peru and NeuroDiscovery has negotiated rights to access the plant in Peru.

Management/Board additions

NeuroDiscovery is building its Board and management team. In August it appointed Tony Evans to its Board who has extensive biotech experience, most recently with the neuropathic pain group **Xenome** in Queensland, as CEO. NeuroDiscovery is currently in looking to appoint a UK-based CEO.

Bioshares recommendation: **Speculative Buy Class B**

Bioshares

Acrux Adds Nicotine Program

Acrux (ACR: \$1.30) has added an additional clinical program to its pipeline, in a spray-on nicotine delivery system for smoking cessation. The company has completed Phase I pharmacokinetic trials in 16 volunteers and found the its metered dose delivery spray onto the skin can effectively reach the blood stream within 30 minutes and provide a base level of nicotine to the user from a twice daily application.

The smoking cessation market is worth around US\$1 billion a year, with transdermal patches making up approximately 60% of sales. The spray on delivery system has potential advantages that includes the positive features of the transdermal patches and the lozenges and chewing gums. These preliminary studies have shown the system can provide a base level of nicotine throughout the day, similar to patches, and it may also serve nicotine cravings, having a 30 minute delivery time into the blood stream. The next stage for the company is to firm up its development plan and complete market analysis for its novel delivery system.

A short term driver for this stock is expected with its first product, Evamist, anticipated for imminent release onto the market in the USA. Evamist is a spray-on hormone replacement therapy for women to reduce effects associated with menopause. It will be marketed by KV Pharmaceutical. Acrux will receive a quarterly royalty payment of around 10% with a slight variation depending on sales. KV Pharmaceutical has estimated peak sales of its product will reach US\$125 million, although we believe this figure is conservative and may reach US\$200 million.

Bioshares recommendation: **Speculative Buy Class A**

Bioshares

Frustration at Optiscan Drives More Aggressive Approach

At Optiscan Imaging's (OIL: 33 cents) AGM this week the company signalled a more aggressive approach to the development of its miniature confocal endomicroscope business. A merger between its marketing partner **Pentax** with another Japanese firm **Hoya** has placed the commercialisation of the Optiscan/Pentax ISC1000 somewhat in limbo as the Japanese companies complete their merger.

Sales of the Optiscan components to Pentax for the ISC1000, a flexible endomicroscope used for real time imaging at a cellular level during internal examinations, will slow this financial year due to a backlog of inventory at Pentax. Optiscan is sending its chairman, Grant Latta, to meet with the head of Pentax to clarify the position of both companies with respect to this program, which has been the cause of frustration for Optiscan in recent months.

In the meantime development of a rigid version of the endomicroscope is being accelerated by Optiscan's other partner, the **Carl Zeiss Group**. Zeiss and Optiscan are currently conducting trials in an unnamed indication in Germany and the US with the rigid endomicroscope with results expected early in 2008. If successful, Zeiss will look to bring the product to market in just over a year post results with an anticipated revenue stream to Optiscan of \$16 million over the next five years.

A positive result from this trial will not only ensure continuation of this program, but may also open the door to further collaborations with the Zeiss group for other applications.

Optiscan indicated it is maturing its business model, meaning it will seek to maintain more of upside with its products moving forward. Another application for the Optiscan devices is in women's health, detecting diseases such as endometriosis and cervical cancer, where the company is looking to take the programs further along the development path, independently.

The uncertainty of the development of the lead product with Pentax is disappointing. It may just take time for the market for this product to be developed, which is slowly occurring with four major teaching programs around the world in Mainz, Milan, Sheffield and at the Johns Hopkins University in Baltimore. Or there may need to be a resolution with Pentax over how the commercialisation of the device will proceed.

As this happens, Optiscan is aggressively pursuing its rigid endomicroscope applications. Optiscan Imaging is capitalised at \$34 million with \$6 million in cash at June 30.

Bioshares recommendation: **Speculative Buy Class A**

Bioshares



Bioshares Model Portfolio (9 November 2007)

Company	Price (current)	Price added to portfolio	Date added
Ventracor	\$0.67	\$0.625	October 2007
Sirtex Medical	\$5.00	\$3.90	October 2007
Clinuvel Pharmaceuticals	\$0.43	\$0.66	September 2007
Progen Pharmaceuticals	\$2.75	\$3.52	September 2007
Starpharma Holdings	\$0.40	\$0.37	August 2007
Pharmaxis	\$4.36	\$3.15	August 2007
Circadian Technologies	\$1.24	\$1.45	June 2007
Universal Biosensors	\$1.60	\$1.23	June 2007
Biota Holdings	\$1.32	\$1.55	March 2007
Tissue Therapies	\$0.47	\$0.58	February 2007
Probiotec	\$1.33	\$1.12	February 2007
Phylogica	\$0.21	\$0.42	January 2007
Peplin Inc	\$0.79	\$0.83	January 2007
Peptech	\$1.18	\$1.31	October 2006
Sunshine Heart	\$0.16	\$0.19	September 2006
Chemgenex Pharma.	\$0.99	\$0.38	June 2006
Cytopia	\$0.53	\$0.46	June 2005
Optiscan Imaging	\$0.33	\$0.35	March 2005
Acrux	\$1.30	\$0.83	November 2004
Alchemia	\$0.73	\$0.67	May 2004

Portfolio Changes –9 Nov 2007

IN:
No changes

OUT:
No changes

How Bioshares Rates Stocks

For the purpose of valuation, *Bioshares* divides biotech stocks into two categories. The first group are stocks with existing positive cash flows or close to producing positive cash flows. The second group are stocks without near term positive cash flows, history of losses, or at early stages of commercialisation. In this second group, which are essentially speculative propositions, *Bioshares* grades them according to relative risk within that group, to better reflect the very large spread of risk within those stocks.

Group A

Stocks with existing positive cash flows or close to producing positive cash flows.

- Buy** CMP is 20% < Fair Value
- Accumulate** CMP is 10% < Fair Value
- Hold** Value = CMP
- Lighten** CMP is 10% > Fair Value
- Sell** CMP is 20% > Fair Value
(CMP–Current Market Price)

Group B

Stocks without near term positive cash flows, history of losses, or at early stages commercialisation.

Speculative Buy – Class A

These stocks will have more than one technology, product or investment in development, with perhaps those same technologies offering multiple opportunities. These features, coupled to the presence of alliances, partnerships and scientific advisory boards, indicate the stock is relative less risky than other biotech stocks.

Speculative Buy – Class B

These stocks may have more than one product or opportunity, and may even be close to market. However, they are likely to be lacking in several key areas. For example, their cash position is weak, or management or board may need strengthening.

Speculative Buy – Class C

These stocks generally have one product in development and lack many external validation features.

Speculative Hold – Class A or B or C

Sell

Corporate Subscribers: Phylogica, Pharmaxis, NeuroDiscovery, Biotech Capital, Cygenics, Cytopia, Biodiem, Peptech, Starpharma Holdings, Cogstate, Xceed Biotechnology, Incitive, Optiscan Imaging, Bionomics, ChemGenex Pharmaceuticals, Medical Therapies, Circadian Technologies, Biota Holdings, Stem Cell Sciences, Halcygen Pharmaceuticals, Peplin, BioMD, Impedimed

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