Mesoblast MSB.AX MSB AU

HEALTH CARE & PHARMACEUTICALS

NOMURA
EQUITY RESEARCH

Announces start of Phase 3 trial in transplant

Beginning of Phase III trial further de-risks the business

July 7, 2011

Rating Remains	**Buy**
Target price Remains	AUD 10.45
Closing price July 6, 2011	AUD 8.46
Potential upside	+23.5%

Action: MSB has been FDA approved to start a Phase III trial for bone-marrow transplantation

We believe the trial should run for 12 months, with results available 3-6 months after that. These timelines are within our forecasts for timing of potential revenues for MSB. We continue to forecast first potential sales for MSB from bone-marrow transplant in FY14.

Catalyst: Market size is cUS$2.4bn

There are 12,500 unrelated allogeneic bone-marrow transplants per year in the US. In the US, MSB believe that an additional c20,000 potential patients do not receive transplants because of a lack of matched donors in current donor registries. MSB's MPCs could allow these patients to potentially receive a transplant from donors who have lower levels of matching. In effect, MSB's MPCs could expand the donor pool for unrelated allogeneic bone-marrow transplants. Although few in number, bone-marrow transplants are very expensive procedures, with the potential price for the MSB stem cells ranging from US$50K to US$100K.

Valuation: TP unchanged at A$10.45, BUY maintained

We calculate that the NPV of the potential opportunities developed by MSB is A$17.14. We had already forecast that MSB would enter a Phase III trial in bone-marrow transplant. Now that MSB have begun a Phase III trial, we believe the probability of MSB getting its product onto market is 61.2% (according to data from Tufts University, USA). Hence, our risk-weighted valuation previously increased to A$10.45 (=0.61xA$17.14). We maintain this as our target price.

30 Jun	FY10		FY11F		FY12F		FY13F
Currency (AUD)	Actual	Old	New	Old	New	Old	New
Revenue (mn)	0	116	116	154	154	183	183
Reported net profit (mn)	-15	67	67	95	95	116	116
Normalised net profit (mn)	-15	67	67	95	95	116	116
Normalised EPS	-0.1	0.3	0.3	0.3	0.3	0.4	0.4
Norm. EPS growth (%)	na	na	na	9.1	9.1	22.3	22.3
Norm. P/E (x)	na	N/A	28.5	N/A	26.4	N/A	21.6
EV/EBITDA	na	N/A	24.2	N/A	16.7	N/A	13.1
Price/book (x)	35.3	N/A	4.8	N/A	4.1	N/A	3.4
Dividend yield (%)	na	N/A	na	N/A	na	N/A	na
ROE (%)	-46.4	25.0	25.0	17.3	17.3	17.7	17.7
Net debt/equity (%)	net cash	net cash	net cash	net cash	net cash	net cash	net cash

Source: Nomura estimates

Key company data: *See page 2 for company data and detailed price/index chart.*
Rating: *See report end for details of Nomura's rating system.*

Anchor themes

As the aged population is having more operations, we believe there will be more demand for treatments, which MSB can deliver.

Nomura vs consensus

There is minimal consensus data available.

Research analysts

Key data on Mesoblast

Income statement (AUDmn)

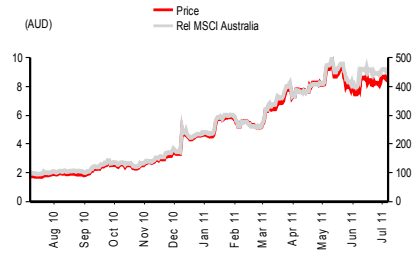
Year-end 30 Jun	FY09	FY10	FY11F	FY12F	FY13F
Revenue	**0**	**0**	**116**	**154**	**183**
Cost of goods sold	0	0	0	-1	-1
Gross profit	**0**	**0**	**116**	**153**	**182**
SG&A	-10	-11	-25	-33	-37
Employee share expense					
Operating profit	**-10**	**-11**	**91**	**120**	**145**
EBITDA	**-10**	**-11**	**92**	**128**	**155**
Depreciation	0	0	-2	-8	-9
Amortisation	0	0	0	0	0
EBIT	-10	-11	91	120	145
Net interest expense	1	1	7	15	20
Associates & JCEs					
Other income	-3	-4	-2	0	0
Earnings before tax	**-12**	**-15**	**96**	**135**	**165**
Income tax	0	0	-29	-41	-50
Net profit after tax	**-12**	**-15**	**67**	**95**	**116**
Minority interests	0	0	0	0	0
Other items					
Preferred dividends					
Normalised NPAT	**-12**	**-15**	**67**	**95**	**116**
Extraordinary items	0	0	0	0	0
Reported NPAT	**-12**	**-15**	**67**	**95**	**116**
Dividends	0	0	0	0	0
Transfer to reserves	**-12**	**-15**	**67**	**95**	**116**
Valuation and ratio analysis					
FD normalised P/E (x)	na	na	28.5	26.4	21.6
FD normalised P/E at price target (x)	na	na	34.4	31.9	26.1
Reported P/E (x)	na	na	27.9	25.6	20.9
Dividend yield (%)	na	na	na	na	na
Price/cashflow (x)	na	na	17.2	24.0	19.7
Price/book (x)	45.7	35.3	4.8	4.1	3.4
EV/EBITDA (x)	na	na	24.2	16.7	13.1
EV/EBIT (x)	na	na	24.7	17.8	13.9
Gross margin (%)	100.0	100.0	99.8	99.4	99.3
EBITDA margin (%)	-5,375.1	-199,515.4	79.7	83.1	84.2
EBIT margin (%)	-5,439.4	-202,302.4	78.2	78.1	79.2
Net margin (%)	-6,594.6	-268,743.5	58.1	61.5	63.1
Effective tax rate (%)	na	na	30.0	30.0	30.0
Dividend payout (%)	na	na	0.0	0.0	0.0
Capex to sales (%)	91.3	1,583.9	1.5	5.0	5.0
Capex to depreciation (x)	2.2	0.8	1.0	1.0	1.0
ROE (%)	-47.2	-46.4	25.0	17.3	17.7
ROA (pretax %)	-83.9	-124.2	34.6	23.3	28.1
Growth (%)					
Revenue	na	-97.0	2,110,163.9	32.7	19.1
EBITDA	na	na	na	38.4	20.7
EBIT	na	na	na	32.6	20.8
Normalised EPS	na	na	na	9.1	22.3
Normalised FDEPS	na	na	na	7.8	22.3
Per share					
Reported EPS (AUD)	-0.10	-0.11	0.31	0.34	0.41
Norm EPS (AUD)	-0.10	-0.11	0.31	0.34	0.41
Fully diluted norm EPS (AUD)	-0.10	-0.11	0.30	0.33	0.40
Book value per share (AUD)	0.19	0.24	1.79	2.13	2.54
DPS (AUD)	0.00	0.00	0.00	0.00	0.00

Source: Nomura estimates

Notes

We forecast sales to begin in FY14

Price and price relative chart (one year)



(%)	1M	3M	12M
Absolute (AUD)	7.2	19.3	367.6
Absolute (USD)	8.0	23.9	489.1
Relative to index	9.0	24.0	360.9
Market cap (USDmn)	2,689.2		
Estimated free float (%)	55.0		
52-week range (AUD)	9.95/1.72		
3-mth avg daily turnover (USDmn)	7.87		
Major shareholders (%)			
Silviu Itescu	25.0		
Cephalon Inc	20.0		

Cashflow (AUDmn)

Year-end 30 Jun	FY09	FY10	FY11F	FY12F	FY13F
EBITDA	-10	-11	92	128	155
Change in working capital	-1	-1	31	2	2
Other operating cashflow	2	3	-12	-26	-30
Cashflow from operations	**-9**	**-9**	**111**	**104**	**127**
Capital expenditure	0	0	-2	-8	-9
Free cashflow	**-9**	**-9**	**110**	**96**	**118**
Reduction in investments	3	4	5	0	0
Net acquisitions	0	0	0	0	0
Reduction in other LT assets	0	0	-11	0	0
Addition in other LT liabilities	0	0	250	0	0
Adjustments	-3	-5	-244	0	0
Cashflow after investing acts	**-9**	**-10**	**110**	**96**	**118**
Cash dividends	0	0	0	0	0
Equity issue	11	26	124	0	0
Debt issue	0	0	0	0	0
Convertible debt issue					
Others	0	0	0	0	0
Cashflow from financial acts	**11**	**26**	**124**	**0**	**0**
Net cashflow	**2**	**16**	**234**	**96**	**118**
Beginning cash	14	17	32	266	362
Ending cash	17	32	266	362	480
Ending net debt	-17	-32	-266	-362	-480

Source: Nomura estimates

Notes

We anticipate further milestone payments for MSB

Balance sheet (AUDmn)

As at 30 Jun	FY09	FY10	FY11F	FY12F	FY13F
Cash & equivalents	17	32	266	362	480
Marketable securities	0	0	0	0	0
Accounts receivable	0	1	2	2	3
Inventories	0	0	0	0	0
Other current assets	0	0	0	0	0
Total current assets	**17**	**34**	**268**	**365**	**483**
LT investments	9	5	0	0	0
Fixed assets	0	0	0	0	0
Goodwill	0	0	116	116	116
Other intangible assets	0	0	388	388	388
Other LT assets	0	0	11	11	11
Total assets	**27**	**40**	**783**	**880**	**998**
Short-term debt	0	0	0	0	0
Accounts payable	1	2	11	13	16
Other current liabilities	0	0	22	22	22
Total current liabilities	**1**	**2**	**33**	**35**	**38**
Long-term debt	0	0	0	0	0
Convertible debt					
Other LT liabilities	0	0	250	250	250
Total liabilities	**1**	**2**	**283**	**285**	**288**
Minority interest	0	0	0	0	0
Preferred stock	0	0	0	0	0
Common stock	62	88	481	481	481
Retained earnings	-41	-56	12	106	222
Proposed dividends					
Other equity and reserves	4	6	8	8	8
Total shareholders' equity	**26**	**38**	**500**	**595**	**711**
Total equity & liabilities	**27**	**40**	**783**	**880**	**998**
Liquidity (x)					
Current ratio	14.28	21.01	8.15	10.40	12.81
Interest cover	na	na	na	na	na
Leverage					
Net debt/EBITDA (x)	na	na	net cash	net cash	net cash
Net debt/equity (%)	net cash	net cash	net cash	net cash	net cash
Activity (days)					
Days receivable	420.5	55,780.0	5.3	5.2	5.2
Days inventory	na	na	0.0	0.0	0.0
Days payable	na	na	8,745.7	5,053.8	4,032.0
Cash cycle	na	na	-8,740.4	-5,048.6	-4,026.8

Source: Nomura estimates

Notes

We believe MSB has sufficient cash to fund its R&D portfolio

MSB enters a Phase III trial in bone-marrow transplant

MSB has received clearance from the US Food and Drug Administration to start a Phase III trial for bone-marrow transplantation. We believe the trial should run for 12 months, with results available c6 months after that. These timelines are within our forecasts for timing of potential revenues for MSB.

In our scenario analysis of the opportunities for MSB, we assume the company will ultimately achieve a 5% market share in the US market, and that this will remain constant. On this basis, we calculate that the NPV of the potential opportunities developed by MSB is A$17.14. We had already forecast that MSB would enter a Phase III trial in bone-marrow transplant. Now that MSB have begun a Phase III trial, we believe the probability of MSB getting its product onto market increases from 21.4% to 61.2% (according to data from Tufts University, USA). Hence, our risk-weighted valuation previously increased to A$10.45 (=0.61xA$17.14). We maintain this as our target price.

In this note, we:

- Explain bone-marrow transplantation;
- Outline the potential Phase III clinical trial in bone-marrow transplant for MSB, including its potential endpoints;
- Describe what it means for MSB.

What are MPCs?

Mesenchymal precursor cells (MPCs, also known as mesenchymal stem cells) are adult stem cells that have the ability to become tissues such as bone, heart muscle and cartilage. They do not have immunological markers and will therefore cause no immune reaction when injected into a foreign host. This means MPCs can be harvested as a generic product for any recipient from any donor.

The proprietary technology being commercialised by MSB enables the efficient extraction, isolation and scale-up of MPCs. This technology has allowed for the potential application of commercial, off-the-shelf MPCs harvested from relatively few, non-specific donors in a wide range of serious medical issues. MSB aims to capitalise on its patents that relate to the identification, extraction and culture of adult mesenchymal precursor cells.

Mesenchymal precursor cells (MPCs, also known as mesenchymal stem cells) are adult stem cells that have the ability to become tissues such as bone, heart muscle and cartilage

1. Bone-marrow transplant by expanding cord blood

What is a bone-marrow transplant?

A bone-marrow transplant delivers healthy bone marrow stem cells into the patient. It replaces bone marrow that is either not working properly or has been destroyed (ablated) by chemotherapy or radiation. In a bone-marrow transplant, a patient will receive healthy stem cells after their own bone marrow has been destroyed. There are three kinds of bone-marrow transplants:

- **Autologous bone-marrow transplant**: Stem cells are taken from the patient before the patient gets chemotherapy or radiation treatment. When chemotherapy or radiation is complete, the patient gets their stem cells back. This allows the patient to receive high doses of chemotherapy and radiation;
- **Allogeneic bone-marrow transplant**: In this transplant, stem cells come from another person. Stem cells come from the donor's bone marrow or their blood. Most times, a donor must have the same genetic typing as the patient, so that their blood "matches" the patient's. Donors who are not related to the patient may be found through national bone marrow registries; and
- **Umbilical cord blood transplant**: Stem cells are taken from an umbilical cord right after delivery of an infant. The stem cells are tested, typed, counted, and frozen until they are needed for a transplant.

Cord blood transplantation

The cells collected from the umbilicus and placenta are known as haematopoietic stem cells, and are part of a cord blood unit. This blood is tested, frozen and stored at a cord blood bank for future use. Doctors search the registry of adult marrow or peripheral blood cell donors and cord blood units to find a suitable match for their patients who needs a bone-marrow transplant. If selected, the matching haematopoietic stem cells in cord blood units are transplanted into a patient. The transplant process is the same as for marrow and peripheral blood cell transplants.

Reasons for cord blood transplants

These include:

- **More tolerant matching**: A close match between the patient and the donor or cord blood unit can improve a patient's outcome after transplant. Even though a closely matched cord blood unit is preferred, clinical studies suggest the match may not have to be as close as is needed for marrow or peripheral blood transplants. This is especially the case if the patient has an uncommon tissue type;
- **More quickly available**: Cord blood units are stored and ready to use. A cord blood unit can be selected and delivered to the transplant centre in less than two weeks, whereas it can take two months or more to find an unrelated marrow or peripheral blood donor; and
- **Less graft-versus-host disease**: GVHD is a common complication after an allogeneic transplant (which uses cells from a family member, unrelated donor or cord blood unit). GVHD can range from mild to life-threatening. Studies have found that after a cord blood transplant, fewer patients get GVHD than after marrow or peripheral blood transplants. Patients in the studies who did get GVHD after a cord blood transplant tended to get less severe cases;

Cord blood matching may not have to be as close as is needed for marrow or peripheral blood transplants

What is the focus and previous outcomes of the Phase II MSB trials?

MSB's MPCs act to grow the number of cells in a cord blood transplant before giving it to the patient. MSB has previously announced positive Phase IIb results from its bone-marrow transplant clinical trial. In 30 patients transplanted with MPC-expanded haematopoietic progenitors from cord blood, MSB demonstrated:

- **Increased rate of survival**: 80% of patients successfully achieved the treatment endpoint at 100 days of survival. This is significantly higher than the 38% rate for this composite endpoint achieved after transplantation with non-expanded cord blood in the US registry ($p<0.01$). We believe this was the primary outcome measure;
- **Increased expansion of the haematopoietic stem cells**: The proprietary MPCs expanded haematopoietic stem cells in umbilical cord blood by approximately 40-fold, thus increasing the chances of engraftment;
- **Quicker engraftment**: In patients receiving MPC-expanded cord blood, the median time to neutrophil (white blood cell) recovery was 16 days and to platelet (clotting) recovery 38 days, compared with approximately 30 days and over 90 days, respectively, in published reports of patients transplanted with an unexpanded cord. This implies less opportunistic infections and bleeding for patients post transplant; and
- **Less GVHD**: To date, only 16% receiving expanded cord blood have developed severe graft-versus-host disease, compared to 40% in published reports of patients transplanted with unexpanded cord blood.

The Phase III trial

For this Phase III trial, MSB's MPCs will be used under a US FDA Orphan Drug Designation to expand unrelated donor haematopoietic stem and progenitor cell numbers for use in patients with haematologic malignancies (such as leukaemia). Currently, and after discussions with the FDA, MSB has not sought a Special Protocol Assessment (SPA) prior to commencing the Phase III trial, but MSB management state there is the potential for MSB to seek one during the trial.

The primary endpoint for the clinical trial is a comparison to controls for time to engraftment for neutrophils (PMNs) and platelets

The SPA provides an agreement between the FDA and MSB regarding designs, including size and clinical endpoints, of the pivotal trial to support an efficacy claim in a subsequent Biologic License Application (BLA). This implies that if the results from a SPA are sufficiently positive, then the US FDA is more likely to approve a BLA.

Endpoints

The primary endpoint for the clinical trial is a comparison to controls for time to engraftment for white blood cell neutrophils (PMNs) and blood-clotting platelets. MSB management state that significant results for this endpoint were achieved in Phase II trials. Secondary endpoints include:

- **Survival**: the treatment arm will be compared to controls; and
- **Secondary benefits of faster engraftment of PMNs and platelets**: The treatment arm will be compared to controls in terms of rates of Graft vs. Host Disease (GVHD), infection and rates of bleeding episodes.

We continue to forecast the start of US revenues for MSB from bone-marrow transplant in 1HFY14. This is shown in the following figure.

Fig. 1: MSB AU – Bone-marrow transplant potential timeline

As at July 2011

Date (CY)	Date (FY)	Trial	Nomura comment
3QCY11	Start FY12	Beginning of Phase 3 trial in Bone Marrow Transplant	Mesoblast has sufficient cash reserves to fund this Phase 3 trial
End 1HCY12	End 2HFY12	Completion of Phase 3 Trial in Bone Marrow Transplant	
3QCY12	Start 2QFY13	Release of results of Phase 3 Trial in Bone Marrow Transplant	New Drug application (NDA) filing to be determined upon final results
End 1HCY13	1HFY14	US regulatory approval - NDA marketing authorisation for Bone Marrow Transplant	Start US revenues for MSB

Source: Nomura estimates

Market size and potential

There are 12,500 unrelated allogeneic bone-marrow transplants per year in the US and 30,000 worldwide. In the US, MSB believe that an additional c20,000 potential patients could receive unrelated allogeneic bone-marrow transplants, but do not do so because of a lack of matched donors in current donor registries. MSB's MPCs could allow these patients to potentially receive a transplant from donors who have lower levels of matching. In effect, MSB's MPCs could expand the donor pool for unrelated allogeneic bone-marrow transplants.

Considering the small market, MSB has been given orphan-drug status, allowing for an accelerated review process by the FDA, seven-year market exclusivity upon authorisation, tax benefits and exemption from user fees.

The unrelated allogeneic bone-marrow transplant market has a potential size of cUS$2.4bn pa

Although few in number, bone-marrow transplants are very expensive procedures, with the price for the stem cells ranging from US$50,000 to US$100,000 for the allogeneic type in the US. This equates to a potential market size of cUS$2.4bn.

Cord-blood transplants are still in their infancy stage, so far totalling just 8,000 worldwide, but they are finding greater appeal as experience grows. MSB's product will only help to increase this appeal, in our view. Growth rates for this product depend heavily on its efficacy. If useful, it will likely see significant growth given around 75% of patients who need a bone-marrow or cord-blood transplant do not receive one because of associated issues. If this product results in no significant improvement, its growth is likely to remain steady.

3. Near-term timelines

We enclose our near-term timelines for MSB below. By the end of CY11, MSB should have started trials to test the efficacy of MSB's MPCs in Heart Attack and Diabetes Mellitus.

Fig. 2: MSB AU – Potential near-term timelines

As at July 2011

Date (CY)	Date (FY)	Trial	Nomura comment
End CY11	End 1HFY12	Release of Phase 2a Congestive Heart Failure (CHF) Clinical Trial	Interim Phase 2 trials results were significant
End CY11	End 1HFY12	Beginning of Phase 2 trial in Cardiac Disease (AMI)	Phase I trials have been promising
End CY11	End 1HFY12	Beginning of Phase 2 trial in Diabetes Mellitus (DM)	Progression to Phase 3 trial based on final results of this trial
End CY11	End 1HFY12	Beginning of Phase 2 trial in Intervertebral Disc Repair Trial	Progression to Phase 3 trial based on final results of this trial

Source: Company data, Nomura estimates

Diabetes

Type-II diabetes is a major worldwide health issue affecting around 210mn people in the western world and around 24mn in the US alone. The number of cases has been growing at around 6.5% per year, reflecting increasing obesity rates. Type-II diabetes occurs initially as a result of the body's ineffective use of insulin due to prolonged exposure to excess blood sugar levels. This deteriorates the cells' ability to properly store glucose and react with the insulin, leading to an increased insulin requirement and thus to excess stress on the insulin-producing pancreas. This stress eventually leads to progressive damage and a gradual decline in the pancreas' functional ability. If left to progress unabated, this degraded functional ability can cause numerous complications such as heart disease, kidney failure, blindness, nerve damage and, ultimately, death.

Type-II diabetes is mainly considered a lifestyle disease, with obesity and inactivity being the primary causes in most cases (genetics and age normally play a secondary role). Hence, most early cases can be treated through lifestyle changes. Later progression requires the use of drugs and, ultimately, insulin injections. These are ideally avoided, as the risks of rapid hypoglycaemia (very low blood sugar levels) can be high. As a result, there is a market for developing a product that can boost the pancreas' ability to create insulin and control glucose levels naturally as an aid to treatment through positive lifestyle changes.

MSB is developing a product that uses MPCs to naturally enhance the ability of the pancreatic beta cells to produce more insulin

MSB application

MSB is developing a product that uses MPCs to naturally enhance the ability of the pancreatic beta cells to produce more insulin. The pre-clinical trials on mice have shown promising early results with no complications. Of 35 mice, those treated with MPC injections showed a two-fold increase in their pancreatic islet cells relative to the controls, resulting in a 29% higher insulin-producing to glucagon-producing cell ratio, a 34% increase in blood insulin levels and a 35% decrease in blood sugar levels. No subject's reduction in blood sugar went below normal healthy levels, indicating a lower risk of hypoglycaemia compared to insulin-injection treatment.

4. What does the bone-marrow transplant trial mean for MSB?

In updating our valuation of market opportunities for the forecast Phase III clinical trial, we assume MSB will get its product to market within the timeframes listed in the figures below. We also assume the company will ultimately achieve 5% market share in the US market, and that this will remain constant. Our assumptions are shown in the following Figure.

Fig. 3: Scenario analysis assumptions

Health inflation	5%
market share for MSB	5%
US$/A$ exchange rate	1.0
MSB NPATmargin (%)	20%

Source: Nomura estimates

Now that MSB has entered a Phase III trial, then we believe the probability of MSB getting its product onto market has increased from 21.4% to 61.2% (according to data from Tufts University, USA). We had already factored a successful entry into a Phase III trial into our forecasts.

Fig. 4: Probability of drug at clinical trial stage ultimately getting to market (Tufts DiMasi data)

Phase	Probability of success of moving to next phase (%)	Probability of drug getting on market from particular phase (%)
Phase I	62.5	13.4
Phase II	35	21.4
Phase III	68	61.2
Filing	90	90.0

Source: PubMed

On this basis, we calculate that the NPV of the potential opportunities developed by MSB is A$17.14. Outputs from our analysis are shown below.

Fig. 5: Outputs from MSB scenario analysis

Market opportunity	Estimated year of market entry	NPV per share (A$)
Cardiac	2015	$2.33
Diabetes	2016	$7.70
OA of the knee	2016	$0.66
Bone marrow regen.	2014	$1.57
Macular degeneration	2016	$0.99
Spinal Fusion	2016	$0.61
Disc regeneration	2016	$0.20
Bone repair	2015	$3.06
	Total value	**$17.14**
61% risk weighting of portfolio (in line with trial stage)		**$10.45**

Source: Nomura estimates

Hence, our risk-weighted valuation for MSB has already increased to A$10.45 (=0.61xA$17.14).

Valuation and risks

Our assumptions include:

- **Equity beta** – Due to its inherent risks, MSB will have a higher beta than most other industrial companies. We assume that the company's equity (and asset) beta is 1.80, in line with the average beta for higher-risk biotech opportunities.
- **Nominal long-run growth rate** – Given the potentially high growth rate of this business, and in line with those of other high-growth companies in the market, we assume a nominal long-run growth rate of 5% and a real long-run growth rate of 2.5%.

We calculate that the NPV of the potential opportunities developed by MSB is A$17.14

Risks to our investment view

There is still a good deal of uncertainty around MSB's viability in most of its prospective markets. Pre-clinical trials, although positive, give no firm indication of a product's true viability, and full foresight on future market conditions is difficult to obtain. In its favour, MSB's base product is found naturally in the body, and we see little reason to believe that injections of concentrated numbers would cause serious health issues or be relatively less effective in doing their natural job. Cancer concerns arising from the use of embryonic stem cells have not been mirrored in the use of adult stem cells. Problems associated with overgrowth of bones or tissue in sensitive areas are more likely, but less of a concern. If this becomes an issue, we believe that potentially it could be controlled by appropriate dosage and thus would affect the product's viability only marginally. To date, all preclinical and Phase II trials have shown good indications for the product's viability. As it stands, there have been no significant adverse effects or health issues and all Phase II or pre-clinical trials indicate a product with market viability. Its distinctive technology platform and clinical progress probably also places it in the strongest position for its markets relative to its stem-cell competitors. Therefore, we believe this is an attractive investment opportunity for investors with a higher-risk appetite.

Appendix A-1

Analyst Certification

I, David Stanton, hereby certify (1) that the views expressed in this Research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this Research report, (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this Research report and (3) no part of my compensation is tied to any specific investment banking transactions performed by Nomura Securities International, Inc., Nomura International plc or any other Nomura Group company.

Issuer Specific Regulatory Disclosures

Mentioned companies

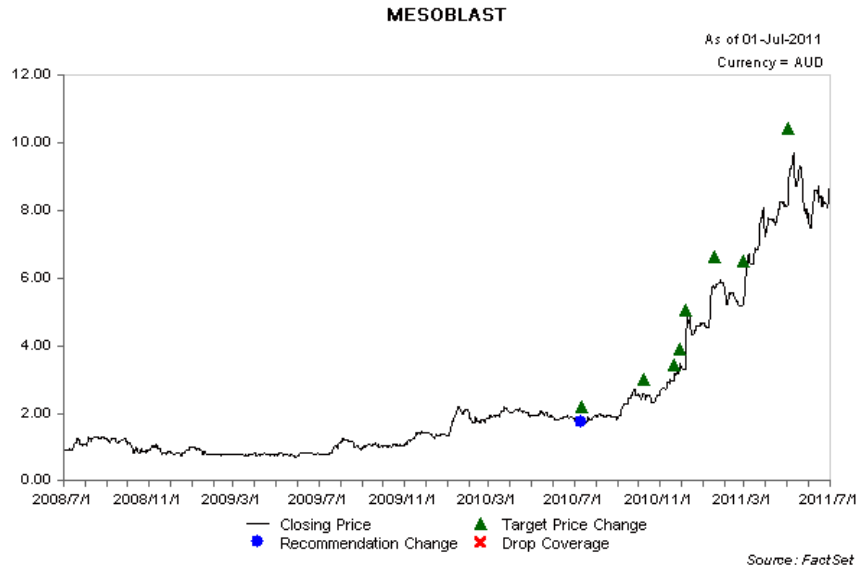
Issuer name	Ticker	Price	Price date	Stock rating	Sector rating	Disclosures
Mesoblast	MSB AU	AUD 8.46	06-7-2011	Buy	Not rated	

Previous Rating

Issuer name	Previous Rating	Date of change
Mesoblast	Not Rated	12-7-2010

Mesoblast (MSB AU) **AUD 8.46 (06-7-2011)** Buy (Sector rating: Not rated)

Rating and target price chart (three year history)



Date	Rating	Target price	Closing price
03-May-2011		10.45	8.19
01-Mar-2011		6.51	5.42
18-Jan-2011		6.66	5.76
08-Dec-2010		5.08	4.05
30-Nov-2010		3.92	3.46
22-Nov-2010		3.44	3.19
08-Oct-2010		3.01	2.60
12-Jul-2010		2.21	1.74
12-Jul-2010	Buy		1.74

For explanation of ratings refer to the stock rating keys located after chart(s)

Valuation Methodology We value MSB (with a TP of $10.45) using DCF analysis, with a WACC of 16.05%. Our assumptions include:• Equity beta – due to its inherent risks, MSB will have a higher beta than most other industrial companies. We assume that the company's equity (and asset) beta is 1.80, in line with the average beta for higher-risk biotech opportunities.• Nominal long-run growth rate – given the potentially high growth rate of this business, and in line with those of other high-growth companies in the market, we assume a nominal long-run growth rate of 5% and a real long-run growth rate of 2.5%.

Risks that may impede the achievement of the target price There is still a good deal of uncertainty around MSB's viability in most of its prospective markets. Pre-clinical trials, although positive, give no firm indication of a product's true viability and full foresight on future market conditions is difficult to obtain. In its favour, MSB's base product is found naturally in the body, and we see little reason to believe that injections of concentrated numbers would cause serious health issues or be relatively less effective in doing their natural job.

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A '**Buy**' recommendation indicates that upside is between 10% and 20%.
A '**Neutral**' recommendation indicates that upside or downside is less than 10%.
A '**Reduce**' recommendation indicates that downside is between 10% and 20%.
A '**Sell**' recommendation indicates that downside is more than 20%.

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