



ALEXIUM

SPECIALTY CHEMICALS AND SOLUTIONS

ALEXIUM INTERNATIONAL GROUP LIMITED

QUARTERLY ACTIVITIES REPORT FOR
THE PERIOD ENDED 31 DECEMBER 2017

INNOVATION. GROWTH. LEADERSHIP.

Highlights from the Quarter

Alexium is pleased to provide the information below on the operations of the business for the second quarter of FY2018. This is another quarter of customer expansion and continual improvements to the business.

- Alexium has added **six new customers** in the Phase Change Material (PCM) market since the commencement of FY2018, **doubling the customer base** acquired in 2017
- While shipments to existing customers slowed during the quarter due to seasonality of the bedding market, shipments of chemistry to new customers **increased by over 400%** from the previous quarter as customer base continues to broaden
- Previously forecasted revenue dip realized during the period from the combination of seasonal effects and the move away from higher volume lower margin business is forecasted to **substantially rebound in Q3** with top-line revenue forecasted to reach **record highs in CY2018** with average margins above long-term targets
- **Increased total gross margin on flame retardants and PCM across all business rose to 29%**, up from 23% in the previous quarter
- Sales volumes of chemistry **increased by 9% over previous quarter**
- Cash burn due to operations* in month of December was only \$47,155 as **order volumes continued to recover from seasonal dip**
- **Raised \$12M** through an institutional placement in December at 35¢ per share to facilitate expected orders from larger customers
- **Added 10 new institutions** to the company share register with four existing institutions increasing their holdings in AJX
- **Issued 4.55M** shares to existing shareholders through the Share Purchase Plan
- **Added two new directors** to the Alexium Board, Sue Thomas and Claire Poll

*Total cash burn in USD less reconciling foreign exchange entry related to capital raise. See "Foreign Currency Effects on Reporting" (page 4).



Summary of Capital Raise and Share Purchase Plan

Alexium recently concluded a Share Purchase Plan (SPP) following an oversubscribed A\$12M Institutional Placement in December 2017 at 35¢ per share. The Institutional Placement enabled the company to increase the institutional shareholder base with 10 new institutional investors. The company offered the SPP to enable retail shareholders to participate in the equity raising at the same price of 35¢ as the institutional holders and with the benefit of no broking or other fees payable by shareholders. Under the SPP, 266 applicants purchased 4.55M shares representing A\$1.6M in additional capital, bringing the total placement to A\$13.6M.

As discussed previously, due to the pivot in Alexium strategy away from bespoke business to platform products and technologies, the size of the average opportunity Alexium pursues has increased by an order of magnitude. Several of these new opportunities that Alexium's platform technologies have enabled us to address have quickly progressed to a financial audit stage. The purpose of this stage is to ensure the company's ability to reliably produce and inventory goods as a requirement of customer orders. The placement and SPP, in addition to our debt facility, has allowed Alexium to demonstrate a stronger balance sheet and working capital availability for all of these opportunities.

Updates on key opportunities which necessitated the placement (including bedding, military and positive regulatory shifts) are given below after the Quarterly Financial Results Overview.



Quarterly Financial Results Overview

Receipts from Customers

Cash receipts from customers were down over last quarter to \$3.4M. This is a result of the seasonal slowdown in bedding that Alexium forecasted in the previous quarterly report as well as some carry forward seasonality from the prior quarter as receipts lag sales by roughly 30 days. While this slow down affected cash receipts in the current period, sales volumes increased by 10% over the previous period and 1150% over Q2 of FY2017.

Research and Development

R&D expenditures for the period were driven by continued efforts on several projects and saw a 5% increase over the prior period. The nature of several upcoming opportunities necessitated the addition of a new team member and implementation of two new pieces of testing equipment which will allow the company to perform internal review that previously required third party analysis. Because of these additions, the company will be able to test and analyze new developments much more quickly and at a lower cost. R&D expenditures are expected to hold flat in the coming quarter.

Advertising and Marketing

The marketing costs associated with the institutional share placement, which was oversubscribed to, were paid upon finalization and are nonrecurring. Projected marketing expenses represent a steep decline over the current and previous periods as the market has become more aware of the Alexium brand.

Product Manufacturing and Operating Costs

Raw material purchases and manufacturing expenses drove the 13% increase in payments, and will position the company to fulfill increased customer orders in the coming months. The increase in purchases and production correspond to the balance of inventory on hand at the end of the reporting period which was up 15% at the reporting date. The accumulation of inventory, which was forecast in the previous quarterly report, will support the increased demand for Alexium's specialty products in the coming quarter and drive gross profits as margins continue to increase.

Staff Costs

Staff costs saw a decline of 3% over the prior period. As new markets and opportunities materialize, the company will add staff to fill gaps and needs in the current organizational structure, but maximizing output and value of current personnel is the company's immediate objective.

Administrative and Corporate Costs

Payments for administrative and corporate costs were up 46% over the previous quarter as a result of annual and non-recurring payments coming due. These items include travel and administrative costs related to the November AGM, prepaid D&O policy premiums and annual audit fees. Total corporate costs excluding these nonrecurring items were down 2% over the previous reporting period and are expected to decline as a percent of rising revenues.

Interest and Costs of Finance

Costs of finance increased by 30% over the prior period resulting from costs associated with the finalization of debt refinancing, which closed at the end of September, being paid in this quarter. Interest costs related to the facility represent improved terms over the previous note which carried a principal balance of USD \$5M versus USD \$10M.

Quarterly Financial Results Overview (continued)

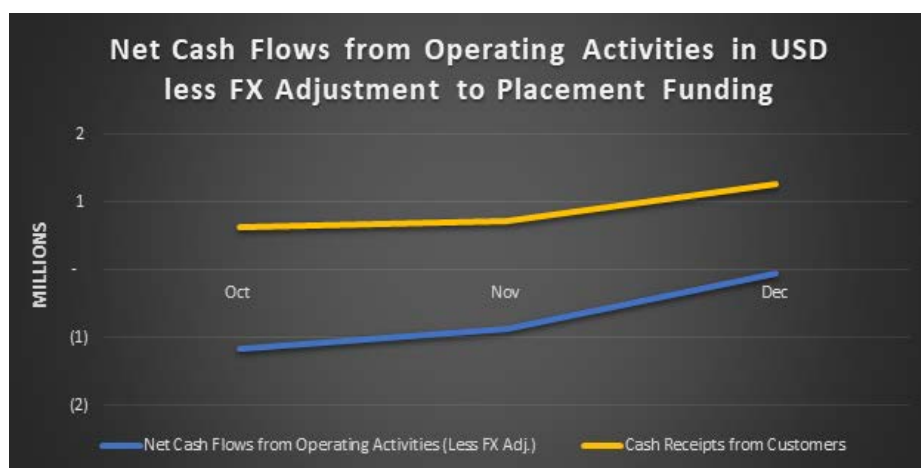
Foreign Currency Effects on Reporting

The recent institutional share placement provided the company with additional working capital which will support upcoming opportunities materializing in the coming months. During the month of funding, the Australian dollar had sizable fluctuations in exchange rates against the US dollar. A reconciling entry is required to recognize the variance between the spot rate at which the funds were transferred and the quarterly average rate.

The foreign exchange implications on the company's primary US operations have been a major factor in the reporting of results for this period. The fluctuations in currency exchange rates is recognized in reconciling entries which reflect the variation in rates. As the Australian dollar gets stronger against the US dollar, the company must recognize the change in value with a negative entry and the alternative will occur if the A\$ weakens against the USD.

The impact can be seen very clearly in the December statement of cash flows. Excluding the intercompany transfer of placement funds, which included a similar exchange effect, the net cash outflow used in operating activities was approximately A\$275,000.

However, the same activities measured in USD resulted in cash outflows of only US \$47,000 in the month of December. The fluctuation of exchange rates is represented in an A\$215,000 reconciling entry to AUD, whereas the same reconciling entry to USD is only \$1,500.



Cash Neutrality

As seen above, a combination of one-off and annual transactions combined with the seasonal slowdown of the bedding market and FX effects from the recent placement resulted in Alexium not being able to continue its positive cash generation throughout this quarter. However, not only did cash receipts from customers and volume levels increase in the month of December, showing a return to normalcy and growth with new customers, but also a return towards cash neutrality. As volumes from existing customers return and new customer continue to be added, Alexium is well poised to see positive cash generation again in the near future.



Financial Growth Trends

Revenue

Revenue for the quarter was down 22% over the prior quarter to \$3.84M. This is a slightly higher decrease than the 20% Alexium forecasted in the prior period's quarterly report. This decrease in revenue was the result of several factors:

- This period represents the first full quarter since executing Alexium's low margin business reduction strategy.
- Alexium experienced a slowdown due to expected reduced demand in the mattress market during the quarter.
- Due to the significant uptick in PCM business throughout this calendar year, Alexium offered volume-based pricing incentives to its largest customers which resulted in slightly reduced revenue dollars.

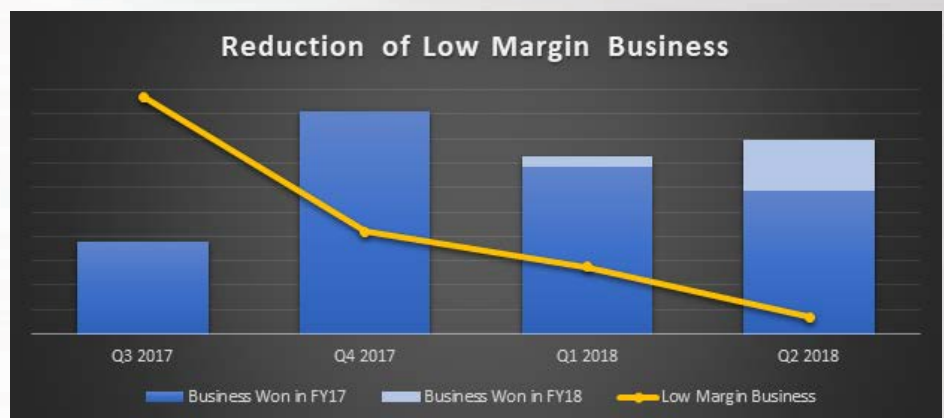


While these factors negatively impacted revenue during this period, business is forecasted to substantially rebound in Q3 FY 2018 with top-line revenue forecasted to reach record highs in CY 2018 with average margins above long term targets.

Reduction of Low Margin Business

The bespoke business model which Alexium previously used to generate market awareness and reliable supply chains has been gradually reduced throughout the calendar year as the company focuses on **sustainable, healthy margin business**.

- The company experienced its first full quarter of this reduction strategy in Q2 FY2018 and its effects on gross margin this year have been profound.
- Alexium's average margins across flame retardant and PCM business increased from -15% to 29% over the last four quarters, which brought it to cash positivity for the first time in company history.
- As sales continue to increase and new customers come online, Alexium is poised to have continued **sustained cash generation** in future periods.

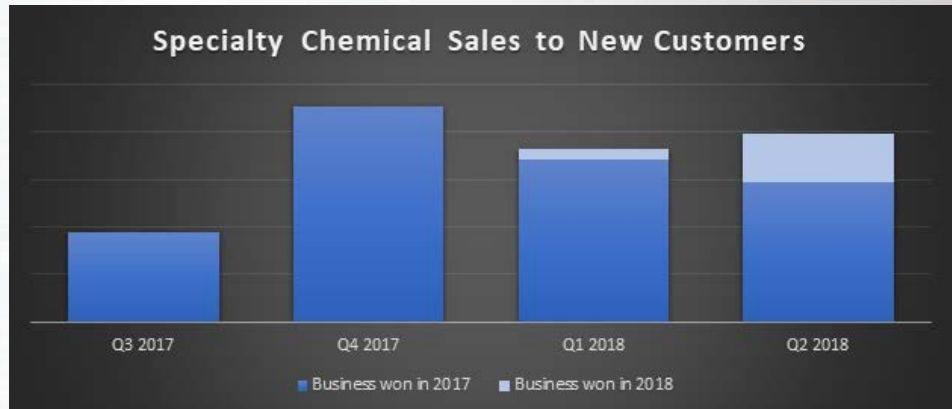


Financial Growth Trends (continued)

Seasonality in Bedding and New Customers

As expected, orders from existing customers slowed down during the period due to a seasonal lull. While the dip in demand impacted total revenue, Alexium was able to increase the number of pounds sold over last quarter and generate over \$800K in sales to new customers during the quarter.

- In addition to this uptick in new business, customers that were acquired in FY2017 whose order quantities were impacted by the seasonal fluctuations, Alexium forecasts a **complete rebound in the next quarter to higher order volumes.**
- This rebound, when considered in conjunction with the new customers who purchased **over 100,000 pounds of chemistry** during this period, will help drive **record high volumes in Q3 FY2018.**



- Volumes to new customers have continued to rise throughout the quarter as several of these customers are still in various stages of inventory scale-up.
- December volumes are already on pace to beat Q2 totals to these customers and represent an opportunity for further increases in sales in Q3 FY2018.



Volume Based Pricing

Alexium's Alexicool product was a strong driver for the increases in revenue and gross margin dollars throughout the last year. In order to win these large orders and compete with competitors in the space, Alexium offered some volume based pricing to certain large customers.

This had a short-term impact on revenue dollars but has opened doors for Alexium to compete for business outside of its original offering into the treatment of foam.

Operational Update on Key Initiatives

Expansion of Market Footprint in Bedding

Alexium has been selected as the supplier of chemistry on a number new mattress lines with both existing and new customers which are expected to be launched at the Las Vegas Furniture market later this month. Leveraging our current success in bedding, Alexium is expanding the Alexicool portfolio to enable penetration into higher volume market segments. Quality control, capacity audits and further development activities have been initiated with our customers, which will also lead to increased chemical volume sales. Key milestones for this effort include:

- Operational, manufacturing and financial audits
- Expansion to new bedding lines in upper pricing tier
- Expand into additional bedding elements and new global markets
- Introduction of next-gen Alexicool product for additional tiers

Increase in Military Uniform Sales Potential

Alexium has been pursuing major FR opportunities in military uniforms for over four years. This effort has primarily focused on the Fire Retardant Army Combat Uniform (FRACU) program. Until recently, the US Department of Defense has communicated one directive regarding uniforms, which is to reduce the cost and increase the durability of the current flame retardant uniforms across the four branches. Alexium continues to make progress with its fabric partner toward that goal. More recently, Alexium has also identified new opportunities in this area that will significantly expand the value for Alexium. Working with additional supply chain partners towards the second goal, Alexium has identified the following milestones:

- Chemical manufacturing and financial audits
- Finalize fabric prototypes
- Limited user evaluation (field trials)
- Acceptance, specification-drafting and award

Alexiflam NF Distribution/Licensing Strategy

Alexium has developed Alexiflam NF as a proprietary flame retardant to provide a durable, formaldehyde-free treatment for cotton-rich fabrics. Based on the range of global markets and potential applications, Alexium is working with potential partners through a distribution/licensing strategy which will accelerate the penetration into these markets. Alexiflam NF is now compliant with REACH registration in the EU. Alexium is working to register this product under TSCA to allow expansion into the US. As previously stated, Alexium has identified and is working on different licensing strategies for the US and EU, given the significant differences in the structure of these two markets. For these purposes, Alexium has identified the following milestones in the US:

- Complete full REACH registration from current pre-registration status
- Complete external validation testing and agreements with potential partner(s) for EU distribution
- Complete testing to support TSCA registration
- Finalize TSCA registration of Alexiflam NF
- Expand Alexiflam NF to US markets for FR applications

Operational Update on Key Initiatives (continued)

Continued Shift of Regulatory Tides Toward Eco-Conscious FR Products

In September of 2017, the US Consumer Product Safety Commission voted to begin the process to ban the use of non-polymeric halogenated flame retardants in a wide range of consumer products. This ban will ultimately push consumers toward eco-conscious FR solutions such as those Alexium has developed. The CPSC decision led to a sequence of state bills introduced and passed in a number of states, including:

- Washington State Department of Ecology determined that manufacturers of children's products sold in Washington State must report the presence of 20 additional compounds, most of which are halogenated flame retardants linked to cancer and used in furniture, baby carriers and car seats
- Vermont passed legislation banning the sale of products using non-polymeric flame retardants
- The states of Alaska, Mississippi, Indiana, West Virginia, Maryland and New Jersey have all introduced legislation banning a wide range of non-polymeric organohalogens from sale

Additional bills banning non-polymeric halogenic flame retardants are expected throughout CY2018, pushing consumers of those products toward alternate solutions such as those Alexium has developed.

A Look Ahead

During calendar year 2016, Alexium successfully completed a phase of top-line growth and built a positive reputation in the chemical industry. With the end of the reporting period, Alexium concluded a second phase of rebalancing its capital structure and revenue stream, increasing GP margins from -2% to 29% by the end of the phase with cash and cash equivalents of A\$17.3M. With Q3 of FY2018, Alexium begins a new phase which is one of sustained profitable growth and long-term cash generation. Over the next four quarters, Alexium will continue to grow its top-line from the result of Q2 to record revenues with average margins exceeding long term targets. Success in military, bedding and new business realized from CPSC-related regulations (which necessitated the capital raise) are not included in those growth projections and provide significant upside potential.

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About Alexium International Limited Group:	1100 New York Avenue NW Suite 710W Washington, DC 20005	ABN: 91 064 820 408 ASX: AJX Nasdaq Designation: AXXIY

Alexium International Group Limited (ASX: AJX, AX:AJX, Nasdaq Designation: AXXIY) holds proprietary patent applications for novel technologies developed to provide flame retardancy for a wide range of materials. These environmentally friendly flame retardants have applications for a number of industries and can be customized. Further, Alexium has developed products for a range of other applications including phase-change materials, water repellents, antimicrobials, and combinations thereof. Alexium also holds patents for a process developed initially by the US Department of Defense, which allows for the surface modification and attachment of nano-particles or multiple chemical functional groups to surfaces or substrates to provide functions such as fire retardancy, waterproofing, oil proofing, and antimicrobial treatments. Applications under development include but are not limited to textiles, packaging, electronics, and building materials. Alexium's chemical treatments are currently marketed under the Alexiflam® and Alexicool® brand names. For additional information about Alexium, please visit www.alexiuminternational.com.

Forward Looking Statement:

This release contains forward-looking statements that are based on current expectations, estimates and projections about Alexium's business, management's beliefs and assumptions made by management. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. Except where required by applicable law, the Company expressly disclaims a duty to provide updates to forward-looking statements after the date of this release to reflect subsequent events, changed circumstances, changes in expectations, or the estimates and assumptions associated with them.

Appendix 4C

Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

Name of entity

ALEXIUM INTERNATIONAL GROUP LIMITED

ABN

91 064 820 408

Quarter ended ("current quarter")

31 December 2017

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	3,391	9,155
1.2 Payments for		
(a) research and development	(366)	(715)
(b) product manufacturing and operating costs	(3,571)	(6,720)
(c) advertising and marketing	(130)	(182)
(d) leased assets	26	-
(e) staff costs	(847)	(1,723)
(f) administration and corporate costs	(1,058)	(1,780)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	4	5
1.5 Interest and other costs of finance paid	(312)	(552)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (GST received)	28	36
1.8 Other (FX Effect on Intercompany Transfer)	(262)	(262)
1.9 Net cash from / (used in) operating activities	(3,097)	(2,738)
2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	(16)	(22)
(b) businesses (see item 10)	-	-
(c) investments	-	-

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
(d) intellectual property	-	-
(e) other non-current assets	-	-
2.2 Proceeds from disposal of:		
(a) property, plant and equipment	-	-
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
2.6 Net cash from / (used in) investing activities	(16)	(22)

3. Cash flows from financing activities		
3.1 Proceeds from issues of shares	11,730	11,730
3.2 Proceeds from issue of convertible notes	-	-
3.3 Proceeds from exercise of share options	-	457
3.4 Transaction costs related to issues of shares, convertible notes or options	(679)	(679)
3.5 Proceeds from borrowings	-	12,161
3.6 Repayment of borrowings	(54)	(6,441)
3.7 Transaction costs related to loans and borrowings	(98)	(578)
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	-	-
3.10 Net cash from / (used in) financing activities	10,899	16,650

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of quarter/year to date	9,457	3,410
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(3,097)	(2,738)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(16)	(22)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	10,899	16,650

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	30	(27)
4.6	Cash and cash equivalents at end of quarter	17,273	17,273

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	12,435	8,137
5.2	Call deposits	4,838	1,320
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	17,273	9,457

6. Payments to directors of the entity and their associates

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Current quarter \$A'000
69
-

N/A

7. Payments to related entities of the entity and their associates

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Current quarter \$A'000
217
-

N/A

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	13,743	13,402
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

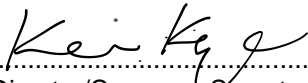
N/A

9. Estimated cash outflows for next quarter	\$A'000
9.1 Research and development	370
9.2 Product manufacturing and operating costs	3,938
9.3 Advertising and marketing	10
9.4 Leased assets	-
9.5 Staff costs	925
9.6 Administration and corporate costs	850
9.7 Other (provide details if material)	-
9.8 Total estimated cash outflows	6,093

10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1 Name of entity		
10.2 Place of incorporation or registration		
10.3 Consideration for acquisition or disposal		
10.4 Total net assets		
10.5 Nature of business		

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:  Date: 23 January 2018

(Director/Company Secretary)

Kevin Kye

Print name:

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.