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Investor Contact: T 441-297-9382

Aspen Insurance Holdings Limited

Noah Fields, Head of Investor Relations Julian Cusack, Chief Financial Officer

European Press Contact: T 44 20 7379 5151

The Maitland Consultancy

Brian Hudspith

North American Press Contact: T 212-371-5999

Abernathy MacGregor

Carina Davidson

ASPEN INSURANCE HOLDINGS LIMITED REPORTS SECOND QUARTER 2006 EARNINGS

- Net profit of \$101.8 million for three months ended June 30, 2006
- Net investment income grew 84.1% to \$49.9 million compared to the second quarter 2005
- Second quarter 2006 combined ratio of 81.6%

HAMILTON, BERMUDA, July 26, 2006 — Aspen Insurance Holdings Limited (NYSE: AHL; BSX: AHL BH) today reported a net profit of \$101.8 million, or \$1.01 per diluted ordinary share, for the three months ended June 30, 2006.

Gross written premiums were \$522.4 million for the second quarter 2006.

Net investment income was \$49.9 million for the second quarter 2006.

Chris O'Kane, Chief Executive Officer, said, "I am pleased with our second quarter results, which provide us with a strong basis from which to approach the second half of the year. We have significantly strengthened our risk management capabilities and further improvement in this area remains a core focus for us. Our strategy of holding back our capacity for North Atlantic hurricane risk earlier in the year in anticipation of improved pricing in the second quarter has been borne out by the increases we were able to achieve for renewals during the second quarter."

Shareholders' equity increased from \$2,039.8 million at December 31, 2005 to \$2,154.4 million at June 30, 2006.

Earnings conference call

Aspen will hold a conference call tomorrow, July 27, 2006 at 8:30 a.m. (Eastern Time) to discuss its 2006 second quarter financial results. Investors may participate in the live conference call by dialing 877-412-8086 (toll-free domestic U.S.) or 973-582-2842 (international); conference ID: 7559625. Please call to register at least 10 minutes before the conference call begins. A replay of the call will be available for 10 days via telephone starting approximately two hours following the live call on July 27, 2006, and can be accessed at 877-519-4471 (toll-free domestic U.S.) or 973-341-3080 (international); digital pin: 7559625. The live call and a replay can also be heard via Aspen's website at www.aspen.bm.

In addition, a financial supplement relating to Aspen's financial results for the second quarter 2006 and six months ended June 30, 2006 is available in the Investor Relations section of Aspen's website at www.aspen.bm. A brief slide presentation which will be used for reference during the earnings call will also be available in the Investor Relations section of Aspen's website.

About Aspen Insurance Holdings Limited

Aspen Insurance Holdings Limited was established in June 2002. Aspen is a Bermudian holding company that provides property and casualty reinsurance in the global market, property and liability insurance principally in the United Kingdom and the United States and specialty insurance and reinsurance consisting mainly of marine and energy and aviation worldwide. Aspen's operations are conducted through its wholly-owned subsidiaries located in London, Bermuda and the United States: Aspen Insurance UK Limited, Aspen Insurance Limited and Aspen Specialty Insurance Company. Aspen has four operating segments: property reinsurance, casualty reinsurance, specialty insurance and reinsurance and property and casualty insurance. Aspen's principal existing founding shareholders include The Blackstone Group, Candover Partners Limited and Credit Suisse First Boston Private Equity. For more information about Aspen, please visit Aspen's website at www.aspen.bm.

Application of the Safe Harbor of the Private Securities Litigation Reform Act of 1995:

This press release contains, and Aspen's earnings conference call may contain, written or oral "forward-looking statements" within the meaning of the U.S. federal securities laws. These statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements that do not relate solely to historical or current facts, and can be identified by the use of words such as "expect," "intend," "plan," "believe," "project," "anticipate," "seek," "will," "estimate," "may," "continue," and similar expressions of a future or forward-looking nature.

All forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or will be important factors that could cause actual results to differ materially from those indicated in these statements. Aspen believes these factors include, but are not limited to: the impact of acts of terrorism and related legislation and acts of war; the possibility of greater frequency or severity of claims and loss activity, including as a result of natural or man-made catastrophic events such as Hurricanes Katrina, Rita and Wilma, than our underwriting, reserving or investment practices have anticipated; evolving interpretive issues with respect to coverage as a result of Hurricanes Katrina, Rita and Wilma; the level of inflation in repair costs due to limited availability of labor and materials after catastrophes; the effectiveness of Aspen's loss limitation methods; changes in the availability, cost or quality of reinsurance or retrocessional coverage; the reliability of, and changes in assumptions to, catastrophe pricing, accumulation and estimated loss models; loss of key personnel; a decline in our operating subsidiaries' ratings with Standard & Poor's, A.M. Best Company or Moody's Investors Service; changes in general economic conditions including inflation, foreign currency exchange rates, interest rates and other factors that could affect our investment portfolio; increased competition on the basis of pricing, capacity, coverage terms or other factors; decreased demand for Aspen's insurance or reinsurance products and cyclical downturn of the industry; changes in governmental regulations or tax laws in jurisdictions where Aspen conducts business; Aspen or its Bermudian subsidiary becoming subject to income taxes in the United States or the United Kingdom; the effect on insurance markets,

business practices and relationships of ongoing litigation, investigations and regulatory activity by the New York State Attorney General's office and other authorities concerning contingent commission arrangements with brokers and bid solicitation activities; the total industry losses resulting from Hurricanes Katrina, Rita and Wilma and the actual number of Aspen's insureds incurring losses from these storms; and with respect to Hurricanes Katrina, Rita and Wilma, Aspen's reliance on loss reports received from cedants and loss adjustors, Aspen's reliance on industry loss estimates and those generated by modeling techniques, the impact of these storms on Aspen's reinsurers, any changes in Aspen's reinsurers' credit quality, the amount and timing of reinsurance recoverables and reimbursements actually received by Aspen from its reinsurers and the overall level of competition and the related demand and supply dynamics as contracts come up for renewal. For a more detailed description of these uncertainties and other factors, please see the "Risk Factors" section in Aspen's Annual Report on Form 10-K for the year ended December 31, 2005, filed with the U.S. Securities and Exchange Commission on March 6, 2006. Aspen undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the dates on which they are made.

Summary of Results — Consolidated Income Statements

(in US\$ millions)	Three Months Ended June 30, 2006	Three Months Ended June 30, 2005	Six Months Ended June 30, 2006	Six Months Ended June 30, 2005
UNDERWRITING REVENUES				
Gross premiums written	522.4	549.4	1,201.1	1,353.5
Premiums ceded	(22.3)	(62.8)	(249.1)	(234.5)
Net premiums written	500.1	486.6	952.0	1,119.0
Change in unearned premiums	(71.1)	(91.6)	(120.4)	(345.3)
Net premiums earned	429.0	395.0	831.6	773.7
UNDERWRITING EXPENSES				
Losses and loss expenses	(223.8)	(195.9)	(456.2)	(403.3)
Acquisition expenses	(83.2)	(77.1)	(176.5)	(147.3)
General and administrative	(42.0)	(20.7)	(04.4)	(50.4)
expenses	(43.0)	(29.7)	(81.2)	(59.1)
Total underwriting expenses	(350.0)	(302.7)	(713.9)	(609.7)
Underwriting income	79.0	92.3	117.7	164.0
OTHER OPERATING REVENUE				
Net investment income	49.9	27.1	94.4	52.6
Interest expense	(4.0)	(3.9)	(7.9)	(7.9)
Total other operating revenue	45.9	23.2	86.5	44.7
Other expense	(0.6)	(3.3)	(2.5)	(4.4)
OPERATING INCOME BEFORE TAX	124.3	112.2	201.7	204.3
OTHER				
Net realized exchange gains (losses)	6.6	(3.5)	7.9	(4.8)
Net realized investment gains (losses)	(3.7)	0.9	(5.1)	0.0
INCOME BEFORE INCOME				
TAX	127.2	109.6	204.5	199.5
Income taxes	(25.4)	(25.8)	(40.9)	(45.6)
NET INCOME AFTER TAX	101.8	83.8	163.6	153.9
Dividends paid on ordinary shares Dividend declared on preference	(14.3)	(10.4)	(28.6)	(20.8)
shares	(3.2)	0.0	(7.1)	0.0
Retained income	84.3	73.4	127.9	133.1
Components of net income (after tax)				
Operating income	98.3	86.6	160.0	158.7
Net realized exchange gains				
(losses) (after tax)	6.6	(3.5)	7.9	(4.8)
Net realized investment gains	(2.1)	0.7	(4.2)	0.0
(losses) (after tax)	(3.1)	0.7	(4.3)	0.0
NET INCOME AFTER TAX	101.8	83.8	163.6	153.9

Per Share Data

(in US\$ except for number of shares)	Three Months Ended June 30, 2006	Three Months Ended June 30, 2005	Six Months Ended June 30, 2006	Six Months Ended June 30, 2005
Basic earnings per ordinary share				
Net income adjusted for preference share dividend	1.04	1.21	1.64	2.22
Operating income adjusted for preference dividend	1.00	1.25	1.61	2.29
Diluted earnings per ordinary share				
Net income adjusted for preference share dividend	1.01	1.16	1.61	2.13
Operating income adjusted for preference dividend	0.98	1.20	1.57	2.20
Weighted average ordinary shares outstanding Weighted average ordinary shares outstanding and	95,250,409	69,342,486	95,246,684	69,336,524
dilutive potential ordinary shares	97,332,916	72,176,578	97,243,409	72,173,377
Book value per ordinary share			20.19	23.07
Diluted book value (treasury stock method)			19.76	22.16
Ordinary shares outstanding at end of the period Ordinary shares outstanding and dilutive potential			95,250,451	69,329,931
ordinary shares at end of the period			97,334,195	72,166,784

Consolidated Balance Sheets

(in US\$ millions)	As at June 30, 2006	As at December 31, 2005
ASSETS		
Investments		
Fixed maturities	3,609.1	3,046.1
Short-term investments	443.6	643.0
Other investments	151.0	0.0
Total investments	4,203.7	3,689.1
Cash and cash equivalents	353.1	748.3
Reinsurance recoverables		
Unpaid losses	1,113.0	1,192.7
Ceded unearned premiums	154.2	72.7
Receivables		~
Underwriting premiums	658.5	541.4
Other	50.0	55.7
Deferred policy acquisition costs	179.6	156.2
Derivative at fair value	38.8	40.5
Office properties and equipment	24.2	22.8
Other assets	11.0	10.2
Intangible assets	8.2	8.2
Total assets	6,794.3	6,537.8
LIABILITIES		
Insurance reserves		
Losses and loss adjustment expenses	2,957.9	3,041.6
Unearned premiums	1,087.0	868.0
Total insurance reserves	4,044.9	3,909.6
Payables		
Reinsurance premiums	152.0	155.0
Taxation	47.0	32.7
Accrued expenses and other payables	139.2	139.4
Liabilities under derivative contracts	7.4	12.0
Total payables	345.6	339.1
Long-term debt	249.4	249.3
Total liabilities	4,639.9	4,498.0
SHAREHOLDERS' EQUITY		
Ordinary shares	1,698.0	1,693.3
Preference shares	222.9	193.8
Retained earnings	272.1	144.2
Accumulated other comprehensive income (loss),	(20.6)	0.7
net of taxes	(38.6)	8.5
Total shareholders' equity	2,154.4	2,039.8
Total liabilities and shareholders' equity	6,794.3	6,537.8

Summarized Cash Flows

(in US\$ millions)	Six Months Ended June 30, 2006	Six Months Ended June 30, 2005
Net cash from operating activities	148.5	378.7
Net cash from investing activities	(544.4)	(254.8)
Net cash from financing activities	(6.5)	(20.5)
Effect of exchange rate movements on cash and cash equivalents	7.2	(3.2)
Increase (decrease) in cash and cash equivalents	(395.2)	100.2
Cash at beginning of the period	748.3	284.9
Cash at end of the period	353.1	385.1

Non-GAAP Financial Measures

In presenting Aspen's results, management has included and discussed certain "non-GAAP financial measures", as such term is defined in Regulation G. Management believes that these non-GAAP measures, which may be defined differently by other companies, better explain Aspen's results of operations in a manner that allows for a more complete understanding of the underlying trends in Aspen's business. However, these measures should not be viewed as a substitute for those determined in accordance with GAAP. The reconciliation of such non-GAAP financial measures to their respective most directly comparable GAAP financial measures in accordance with Regulation G is included in the financial supplement, which can be obtained from the Investor Relations section of Aspen's website at www.aspen.bm.

(1) Annualized Operating Return on Average Equity ("ROAE") is a non-GAAP financial measure. Annualized Operating Return on Average Equity 1) is calculated using operating income, as defined below and 2) excludes from average equity, the average after-tax unrealized appreciation or depreciation on investments and the average after-tax unrealized foreign exchange gains or losses. Unrealized appreciation (depreciation) on investments is primarily the result of interest rate movements and the resultant impact on fixed income securities, and unrealized appreciation (depreciation) on foreign exchange is the result of exchange rate movements between the U.S. dollar and the British pound. Such appreciation (depreciation) is not related to management actions or operational performance (nor is it likely to be realized). Therefore Aspen believes that excluding these unrealized appreciations (depreciations) provides a more consistent and useful measurement of operating performance, which supplements GAAP information. Average equity is calculated as the arithmetic average on a monthly basis for the stated periods.

Aspen presents ROAE as a measure that is commonly recognized as a standard of performance by investors, analysts, rating agencies and other users of its financial information.

See page 22 of Aspen's financial supplement for a reconciliation of operating income to net income and page 15 for a reconciliation of average equity.

(2) **Operating income** is a non-GAAP financial measure. Operating income is an internal performance measure used by Aspen in the management of its operations and represents after-tax operational results excluding, as applicable, after-tax net realized capital gains or losses and after-tax net foreign exchange gains or losses.

Aspen excludes after-tax net realized capital gains or losses and after-tax net foreign exchange gains or losses from its calculation of operating income because the amount of these gains or losses is heavily influenced by, and fluctuates in part, according to the availability of market opportunities. Aspen believes these amounts are largely independent of its business and underwriting process and including them distorts the analysis of trends in its operations. In addition to presenting net income determined in accordance with GAAP, Aspen believes that showing operating income enables investors, analysts, rating agencies and other users of its financial information to more easily analyze Aspen's results of operations in a manner similar to how management analyzes Aspen's underlying business performance. Operating income should not be viewed as a substitute for GAAP net income. Please see above and page 22 of Aspen's financial supplement for a reconciliation of operating income to net income. Aspen's financial supplement can be obtained from the Investor Relations section of Aspen's website at www.aspen.bm.

(3) **Diluted book value per ordinary share** is a non-GAAP financial measure. Aspen has included diluted book value per ordinary share because it takes into account the effect of dilutive securities; therefore, Aspen believes it is a better measure of calculating shareholder returns than book value per share. Please see page 22 of Aspen's financial supplement for a reconciliation of diluted book value per share to basic book value per share. Aspen's financial supplement can be obtained from the Investor Relations section of Aspen's website at www.aspen.bm.