

INVESTOR PRESENTATION FIRST QUARTER 2014



Aspen Insurance Holdings Limited



SAFE HARBOR DISCLOSURE

This slide presentation is for information purposes only. It should be read in conjunction with our financial supplement posted on our website on the Investor Relations page and with other documents filed or to be filed shortly by Aspen Insurance Holdings Limited (the "Company" or "Aspen") with the U.S. Securities and Exchange Commission.

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 financial 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 herein or in the financial supplement, as applicable, which can be obtained from the Investor Relations section of Aspen's website at www.aspen.co.

Application of the Safe Harbor of the Private Securities Litigation Reform Act of 1995: This presentation contains 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," "do not believe," "aim," "project," "anticipate," "seek," "will," "likely," "estimate," "may," "continue," "guidance," "outlook," "trends," "future," "could," "target," and similar expressions of a future or forward-looking nature. All forward-looking statements rely on a number of assumptions, estimates and data concerning future results and events and are subject to a number of uncertainties and other factors, many of which are outside Aspen's control that could cause actual results to differ materially from such statements. Forward-looking statements do not reflect the potential impact of any future collaboration, acquisition, merger, disposition, joint venture or investments that Aspen may enter into or make, and the risks, uncertainties and other factors relating to such statements might also relate to the counterparty in any such transaction if entered into or made by Aspen. 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: our ability to successfully implement steps to further optimize the business portfolio, ensure capital efficiency and enhance investment returns; the possibility of greater frequency or severity of claims and loss activity, including as a result of natural or man-made (including economic and political risks) catastrophic or material loss events, than our underwriting, reserving, reinsurance purchasing or investment practices have anticipated; the assumptions and uncertainties underlying reserve levels that may be impacted by future payments for settlements of claims and expenses or by other factors causing adverse or favorable development; the reliability of, and changes in assumptions to, natural and man-made catastrophe pricing, accumulation and estimated loss models; decreased demand for our insurance or reinsurance products and cyclical changes in the highly competitive insurance and reinsurance industry; increased competition from existing insurers and reinsurers and from alternative capital providers and insurance-linked funds and collateralized special purpose insurers on the basis of pricing, capacity, coverage terms, new capital, binding authorities to brokers or other factors and the related demand and supply dynamics as contracts come up for renewal; changes in general economic conditions, including inflation, deflation, foreign currency exchange rates, interest rates and other factors that could affect our financial results; the risk of a material decline in the value or liquidity of all or parts of our investment portfolio; evolving issues with respect to interpretation of coverage after major loss events; our ability to adequately model and price the effect of climate cycles and climate change; any intervening legislative or governmental action and changing judicial interpretation and judgements on insurers' liability to various risks; the effectiveness of our risk management loss limitation methods, including our reinsurance purchasing; changes in the total industry losses, or our share of total industry losses, resulting from past events and, with respect to such events, our reliance on loss reports received from cedants and loss adjusters, our reliance on industry loss estimates and those generated by modeling techniques, changes in rulings on flood damage or other exclusions as a result of prevailing lawsuits and case law; the impact of one or more large losses from events other than natural catastrophes or by an unexpected accumulation of attritional losses; the impact of acts of terrorism, acts of war and related legislation; any changes in our reinsurers' credit quality and the amount and timing of reinsurance recoverables; changes in the availability, cost or quality of reinsurance or retrocessional coverage; the continuing and uncertain impact of the current depressed lower growth economic environment in many of the countries in which we operate; the level of inflation in repair costs due to limited availability of labor and materials after catastrophes; a decline in our operating subsidiaries' ratings with S&P, A.M. Best or Moody's; the failure of our reinsurers, policyholders, brokers or other intermediaries to honor their payment obligations; our ability to execute our business plan to enter new markets, introduce new products and develop new distribution channels, including their integration into our existing operations; our reliance on the assessment and pricing of individual risks by third parties; our dependence on a few brokers for a large portion of our revenues; the persistence of heightened financial risks, including excess sovereign debt, the banking system and the Eurozone debt crisis; changes in our ability to exercise capital management initiatives (including our share repurchase program) or to arrange banking facilities as a result of prevailing market changes or changes in our financial position; changes in government regulations or tax laws in jurisdictions where we conduct business; changes in accounting principles or policies or in the application of such accounting principles or policies; Aspen or Aspen Bermuda Limited becoming subject to income taxes in the United States or the United Kingdom; loss of one or more of our senior underwriters or key personnel; our reliance on information and technology and third party service providers for our operations and systems; and increased counterparty risk due to the credit impairment of financial institutions. 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 as filed with the U.S. Securities and Exchange Commission on February 20, 2014. 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.

The guidance in this presentation relating to 10% Operating ROE in 2014 and with a further 100 basis point increase over 2014 in 2015 is made as at April 23, 2014. Such guidance assumes for 2014 a pre-tax catastrophe load of \$185 million per annum, normal loss experience and given the current interest rate and insurance pricing environment and for 2015 a pre-tax catastrophe load of \$200mm, normal loss experience, our expectations for rising interest rates, and a less favorable insurance pricing environment. Aspen has identified and described in the following slides actions and additional underlying assumptions in each of its three operating return on equity levers – optimization of the business portfolio, capital efficiency and enhancing investment returns – to seek to achieve the targeted operating ROE in 2014 and 2015. These forward looking statements are subject to the assumptions, risks and uncertainties, as discussed above and in the following slides, which could cause actual results to differ materially from these statements.

In addition, any estimates relating to loss events involve the exercise of considerable judgment and reflect a combination of ground-up evaluations, information available to date from brokers and cedants, market intelligence, initial tentative loss reports and other sources. The actuarial range of reserves and management's best estimate represents a distribution from our internal capital model for reserving risk based on our then current state of knowledge and explicit and implicit assumptions relating to the incurred pattern of claims, the expected ultimate settlement amount, inflation and dependencies between lines of business. Due to the complexity of factors contributing to the losses and the preliminary nature of the information used to prepare these estimates, there can be no assurance that Aspen's ultimate losses will remain within the stated amounts.



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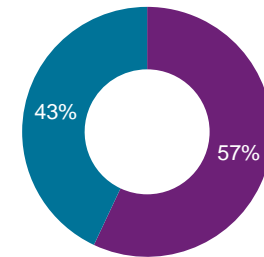
- Aspen Overview: Who We Are
- The Aspen Strategy for Creating Shareholder Value
 - Optimization of Business Portfolio: Tangible and Growing Financial Benefits
 - Capital Efficiency: Proactive Management of Capital
 - Enhancing Investment Return: Delivering Strong Investment Returns with High Quality Portfolio
- Conclusion: Focused on Shareholder Value
- Appendix



ASPEN OVERVIEW: WHO WE ARE

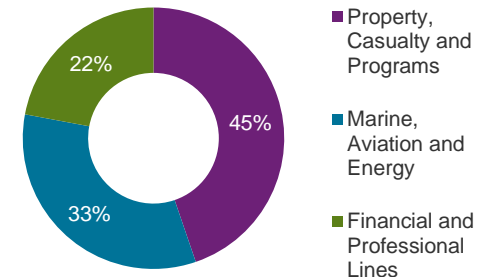
- Bermuda-domiciled specialty insurer and reinsurer
- \$2.7bn gross written premiums for the twelve months ended March 31, 2014
- Underwriting focused company with industry-leading underwriting expertise and collaborative culture
- Long-term track record of shareholder value creation
- Clear strategy to create superior value through well-balanced business portfolio and capital efficiency
- Proven management team, disciplined risk management and balance sheet strength
 - Strong balance sheet with ratings of A / Stable (S&P), A2 / Stable (Moody's) and A / Stable (A.M. Best) for Aspen's operating subsidiaries

Q1 2014 LTM⁽¹⁾ COMPANY BUSINESS MIX



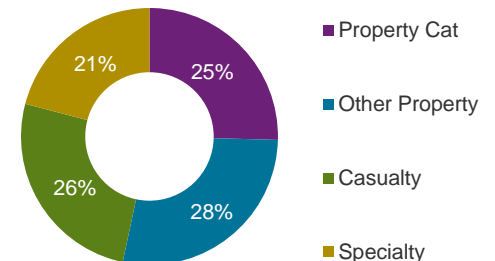
■ Insurance ■ Reinsurance

Q1 2014 LTM INSURANCE BUSINESS LINES



■ Property, Casualty and Programs
■ Marine, Aviation and Energy
■ Financial and Professional Lines

Q1 2014 LTM REINSURANCE BUSINESS LINES

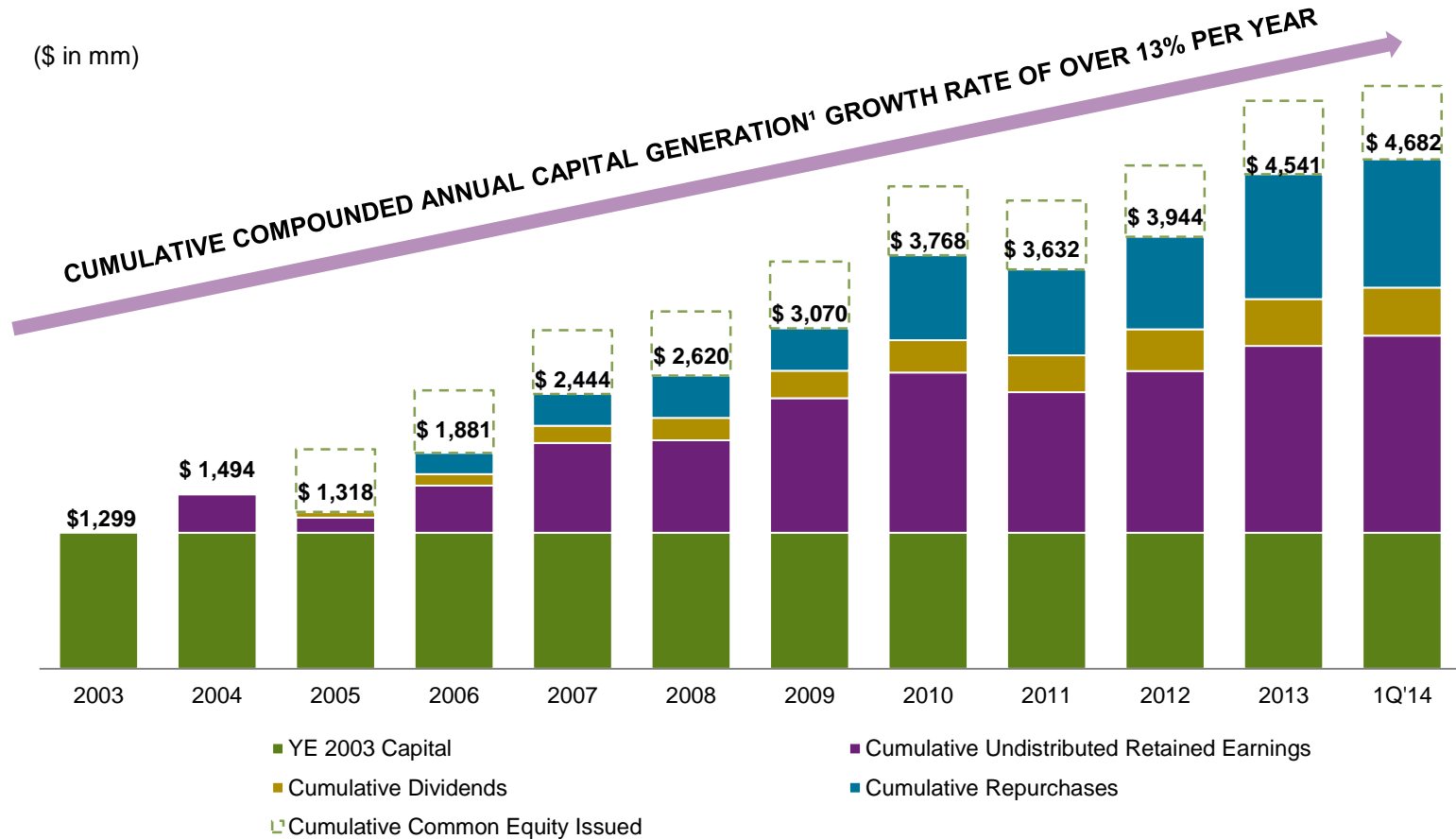


■ Property Cat
■ Other Property
■ Casualty
■ Specialty



ASPEN'S FRANCHISE HAS GENERATED OVER \$3BN OF CAPITAL OVER 10 YEARS ...

(\$ in mm)

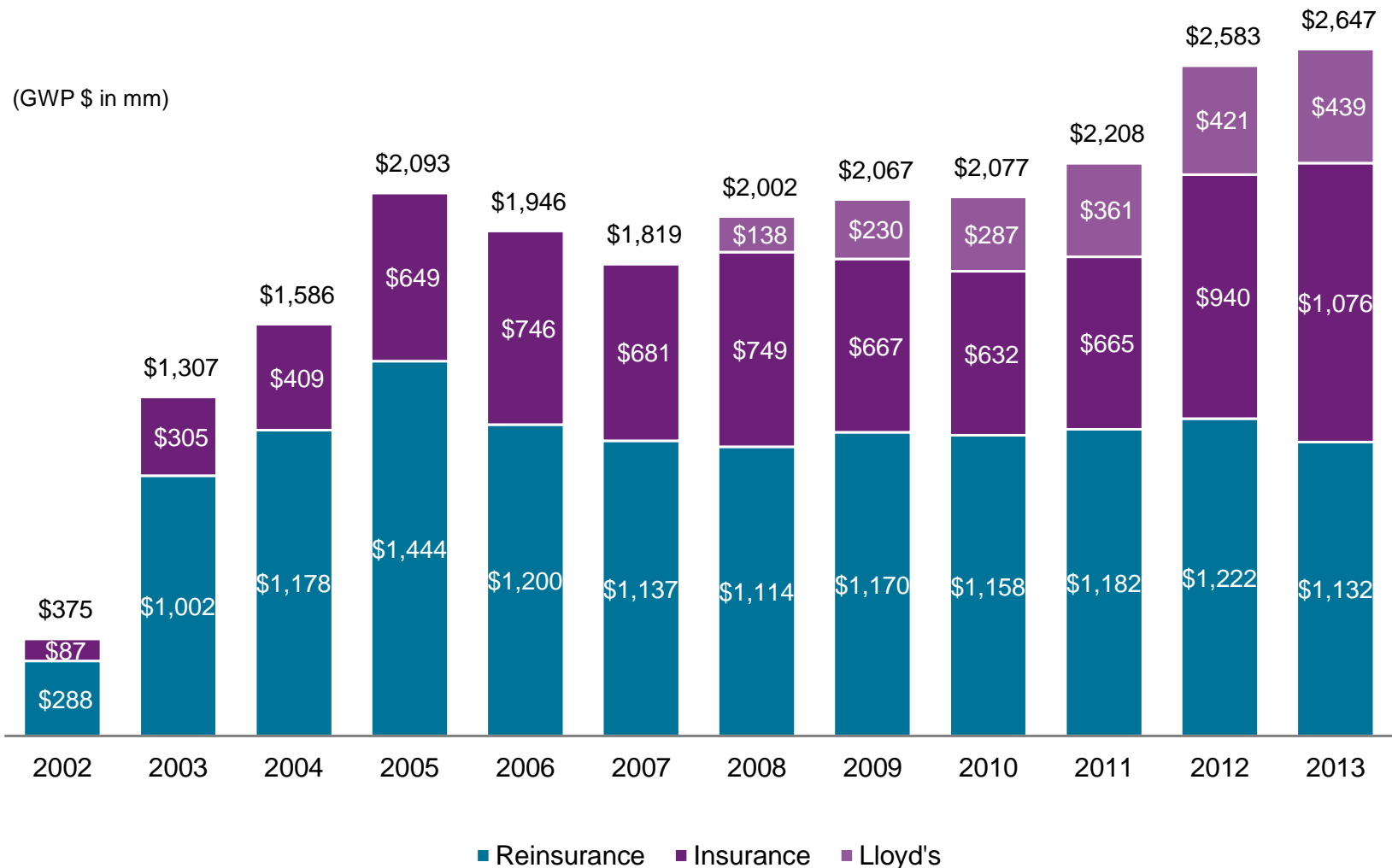


Note: Common Equity Issued is excluded from Cumulative Capital Generated and the Compounded Annual Growth Rate, comprised of the 12.1 million ordinary shares issued in the 2003 initial public offering; 25.9mm ordinary shares issued in 2005; ordinary shares issued upon exercise of investor options; and ordinary shares issued as part of employee incentive plans and to non-employee directors. From 2003 through 2013 the value of these issuances totaled \$947.3mm

(1) Cumulative Capital Generated includes the following since YE 2003: Cumulative Undistributed Retained Earnings, Cumulative Dividends, and Cumulative Repurchases. It excludes Cumulative Common Equity Issued



... WHILE DEVELOPING AN INCREASINGLY DIVERSIFIED MIX OF BUSINESS





ASPEN STRATEGY FOR CREATING SHAREHOLDER VALUE:

THREE LEVERS TO HIGHER ROE

1. Optimization of business portfolio

- Restructured ceded reinsurance and retrocessional programs: estimated \$25mm benefit to net income in 2014 and a further \$20mm benefit to net income in 2015 ⁽¹⁾
- U.S. business posting consistent underwriting profits and on track to achieve scale in 2015
- Lloyd's is the growth engine of a well-established International Insurance business
- Reinsurance business that is an established leader and positioned for continued profitable growth

2. Capital efficiency

- \$341mm repurchased from January 1, 2013 through March 31, 2014
- \$193mm remaining share repurchase authorization as at March 31, 2014
- Plan to continue to opportunistically repurchase ordinary shares

3. Enhancing investment return

- Constantly evaluating ways to increase return on investments within our risk tolerance
- Invested a further \$200mm in equities in 2013 and \$40mm in 1Q 2014
- 6.2% of the investment portfolio in equities at March 31, 2014 compared to 2.5% at year end 2012
- Invested \$200 mm in a BBB emerging market debt strategy in August 2013

Expect to achieve 10% Operating ROE in 2014 with 100 basis point increase in 2015 over 2014⁽²⁾

■ AHL: NYSE (1) As at April 23, 2014. See "Safe Harbor Disclosure" slide 2
(2) As at April 23, 2014, in 2014 this assumes a pre-tax catastrophe load of \$185mm, normal loss experience and given the current interest rate and insurance pricing environment; In 2015 this assumes a pre-tax catastrophe load of \$200mm, normal loss experience, our expectations for rising interest rates, and a less favorable insurance pricing environment. See "Safe Harbor Disclosure" slide 2



1. OPTIMIZATION OF BUSINESS PORTFOLIO: RESTRUCTURED CEDED RETROCESSION AND REINSURANCE PROGRAMS

- Expected improvement to net income of \$25mm in 2014 and a further \$20mm in 2015
 - In 2014, expect \$6mm from Reinsurance and \$19mm from Insurance; in 2015, expect all of the additional \$20mm from Insurance⁽¹⁾

REINSURANCE: ARRANGED INCREASED AMOUNT OF RETRO FOR LOWER PRICE

- Rate environment allows increased retrocession coverage at lower price; expected to drive \$6mm improvement to net income in 2014 given normal loss expectancy

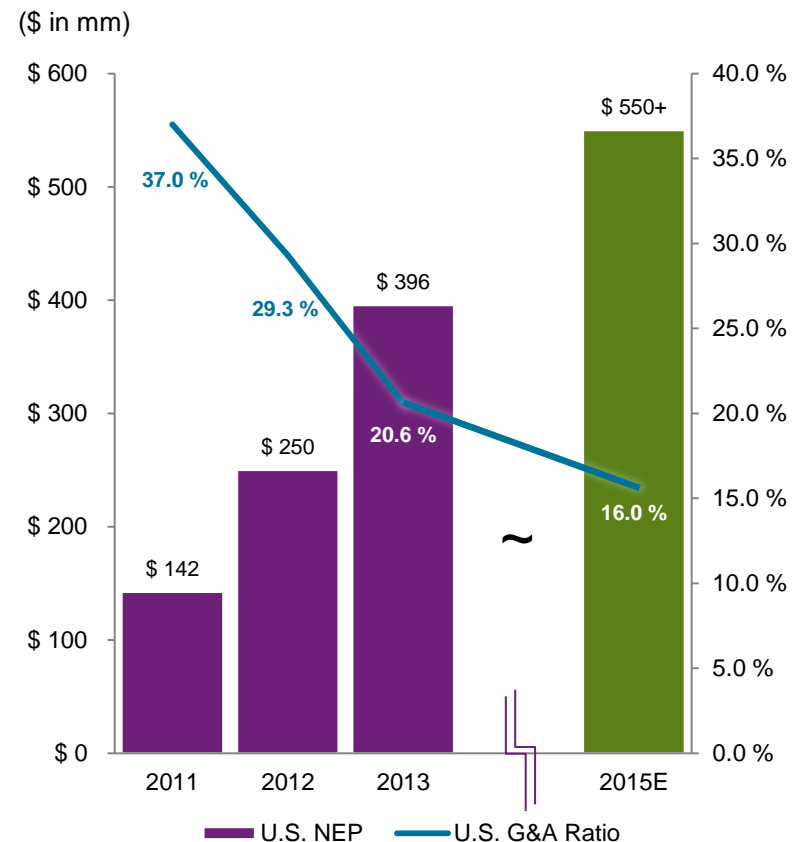
INSURANCE: RESTRUCTURING REINSURANCE EXPECTED TO IMPROVE NET INCOME

- Insurance teams, particularly in U.S., have matured and have established, favorable track records at Aspen, supporting an increased retention strategy
- Restructuring of reinsurance purchasing and higher premium retention expected to generate incremental net income of \$19mm in 2014 and \$20mm in 2015 given normal loss expectancy
- Ratio of net written premium to gross written premium to increase by 5 percentage points in 2014
- Diversified nature of non cat exposed, non correlated portfolio results in only \$20mm increase in capital to support increased retention and expected to have little impact to PML's
- G&A expense level not expected to change following restructuring of reinsurance purchasing



1. OPTIMIZATION OF BUSINESS PORTFOLIO: U.S. SPECIALTY INSURANCE NICHE STRATEGY BEARING FRUIT

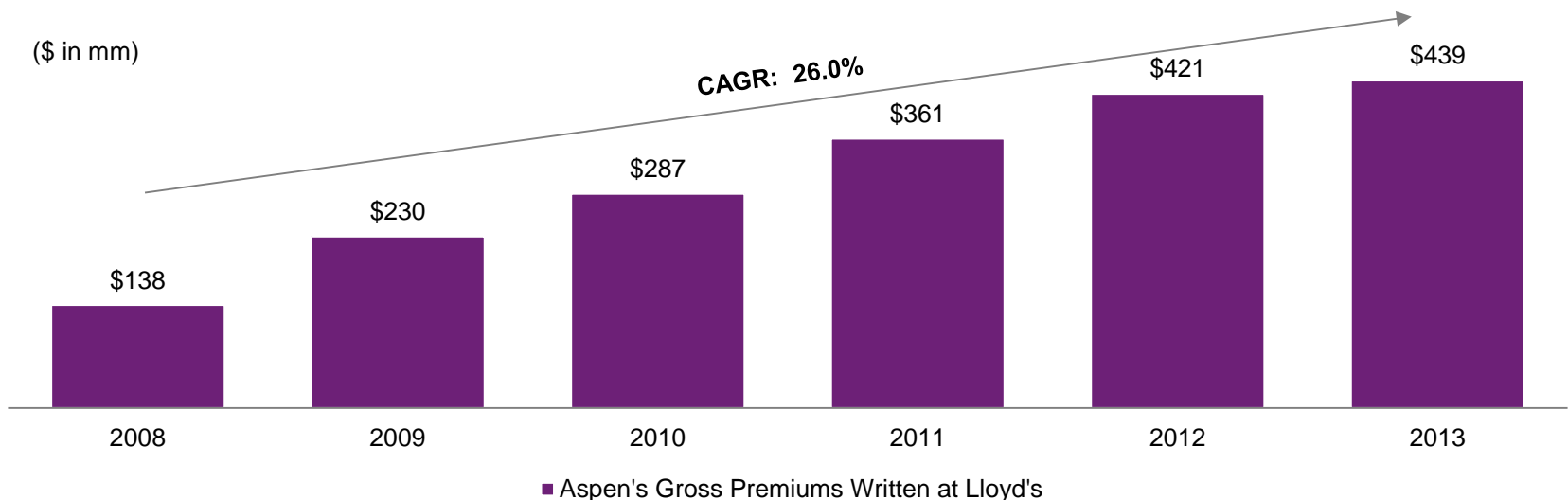
- Platform build-out largely complete after \$150mm investment since 2009⁽¹⁾
- At \$550mm of net earned premiums, which is expected in 2015, the G&A ratio is forecasted to be approximately 16%⁽²⁾
- Loss ratio of 54% for the full year 2013 and 57% in 1Q 2014
- Underwriting profit in every quarter of 2013 and in 1Q 2014
- Growth drivers include:
 - Energy initiative - commenced in 2013
 - Professional lines with targeted, profitable product offerings
- Have yet to recognize over \$200mm of net operating losses carried forward which can be applied against future U.S. Insurance profits⁽³⁾
- The U.S. Insurance business is expected to contribute meaningfully to improved operating income in 2015 and beyond





1. OPTIMIZATION OF BUSINESS PORTFOLIO: LLOYD'S IS THE GROWTH ENGINE OF A WELL-ESTABLISHED INTERNATIONAL INSURANCE BUSINESS

- Well-established international insurance platform with offerings across a diverse range of risks and geographies
 - \$1bn of premiums written in International Insurance in 2013
 - Pre-eminent positions in markets such as Credit & Political Risks; Professional Indemnity / Tech; Kidnap & Ransom
- Lloyd's platform increasingly fundamental for first-tier commercial (re)insurers
 - Clients seek ability to transact through different underwriting platforms
 - Global footprint through over 80 licenses
- Aspen invested to grow organically a large, profitable Lloyd's operation
 - Top performing Lloyd's syndicate

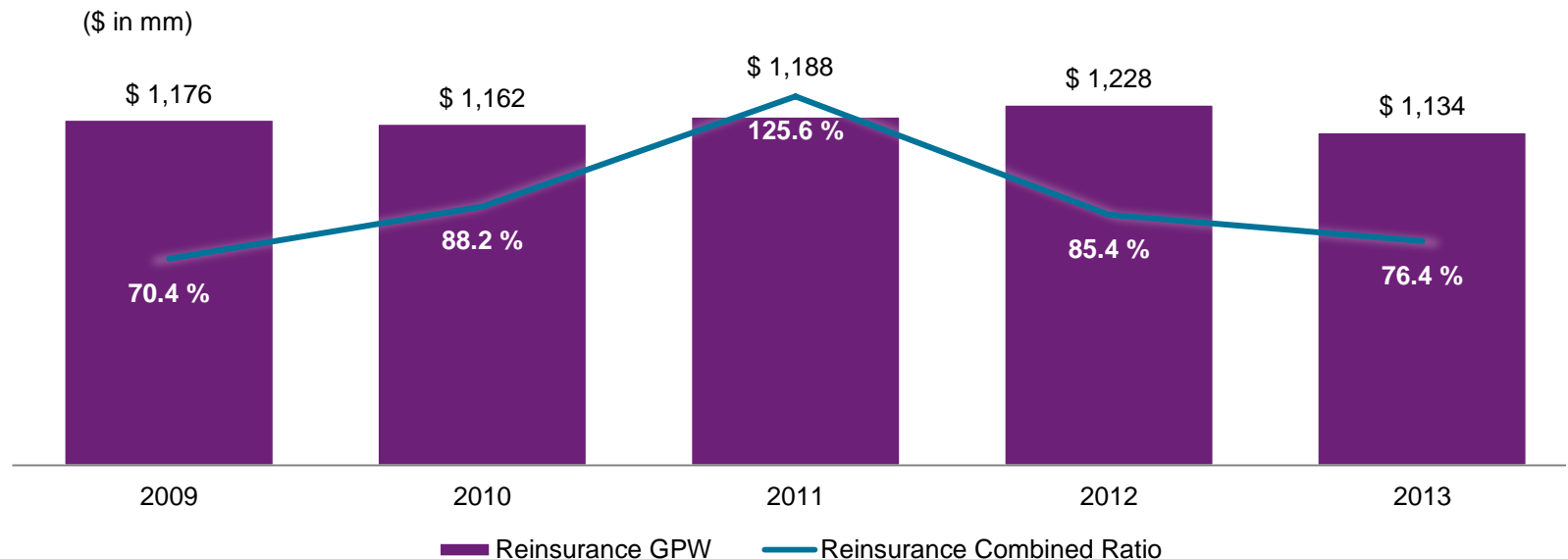




1. OPTIMIZATION OF BUSINESS PORTFOLIO

“AT-SCALE” REINSURANCE BUSINESS WITH ACCESS TO ALL DESIRED RISKS

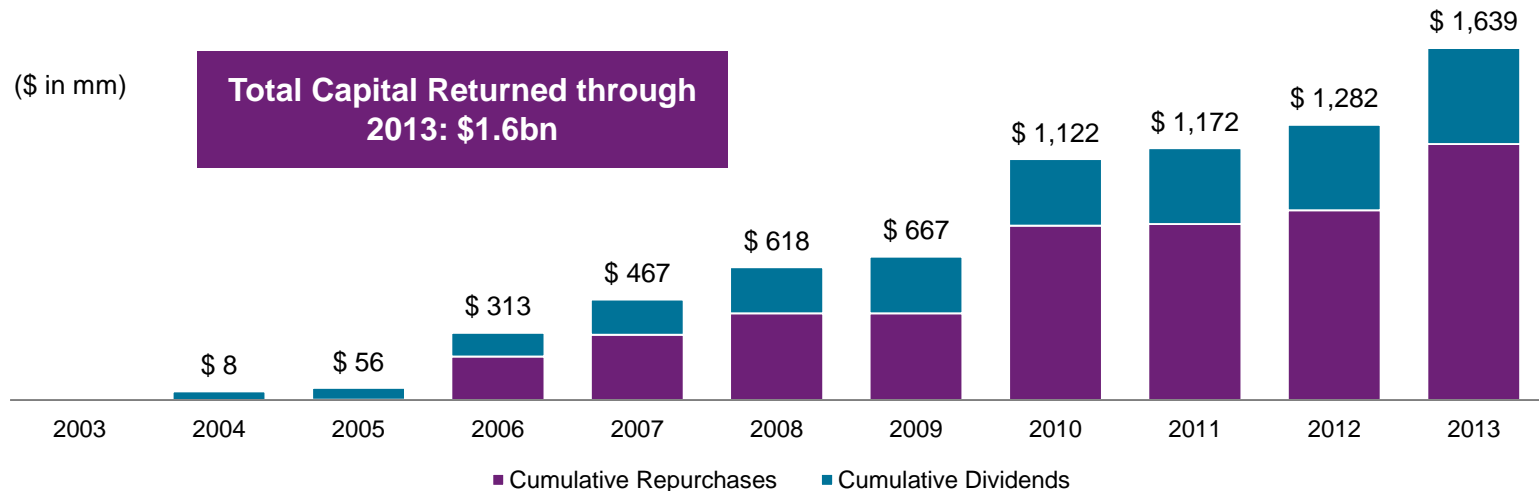
- Resilient, industry-leading business with strong performance across market cycles
- Successful January 1 renewals affirm Aspen’s strategy and broad reach in a difficult market
- Regional structure to meet increasing demand for local market solutions
 - Emerging markets expected to account for 20% of premiums⁽¹⁾
- Ranked 4th among 44 reinsurers as “best overall”⁽²⁾
- Incremental fee income from Aspen Capital Markets: \$100mm of third-party AUM after less than a year





2. CAPITAL EFFICIENCY: SUSTAINED RECORD OF PROACTIVE MANAGEMENT OF CAPITAL

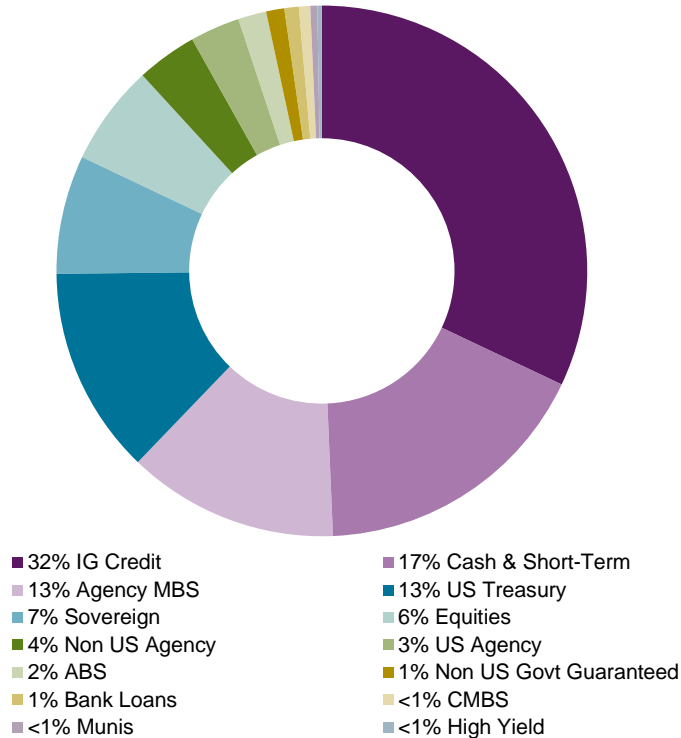
- Continued focus on responsible capital stewardship
 - Announced a new \$500mm share repurchase authorization in February 2013; \$193mm remaining under authorization at March 31, 2014
 - Repurchased \$341mm of ordinary shares from January 1, 2013 through March 31, 2014
- Quarterly dividend increased 6% April 2013; 11% increase announced April 2014
- Returned a cumulative 66% of operating income to shareholders through YE2013 since inception





3. ENHANCING INVESTMENT RETURN

PORTFOLIO ALLOCATIONS MARCH 31, 2014



100% = \$8.3 BILLION

- Stable investment income and total return through all market cycles.
- In the first quarter of 2014:
 - Invested an additional \$40mm in equities
 - Currently have 9.8% of the portfolio in risk assets (equities, bank loans, high yield and BBB emerging market debt)
- In 2013:
 - Increased investment in risk assets from 2.8% at YE 2012 to 9.4% at YE 2013
 - Invested an additional \$200mm in equities. Equity portfolio returned 21% during 2013
 - Invested \$200mm in a BBB rated emerging market debt strategy
 - Invested \$70 mm in BB Bank Loans



CONCLUSION: FOCUSED ON SHAREHOLDER VALUE

- Deep underwriting expertise and understanding of client needs and risks
- Executing plan to drive higher ROE and BVPS growth
 - Optimizing business portfolio to free up capital and improve risk-adjusted returns
 - Improving capital efficiency
 - Enhancing investment return within acceptable risk parameters
- Pursuing selective, profitable growth in exposures we know and understand, subject to market conditions
 - Diversified platform allows us to take advantage of areas where rates are improving
- Expected premium growth across diversified lines is projected to be greater than both growth in expenses and risk allocated capital which should equate to meaningful increased premium leverage

Expect to achieve 10% Operating ROE in 2014 with 100 basis point increase in 2015 over 2014⁽¹⁾

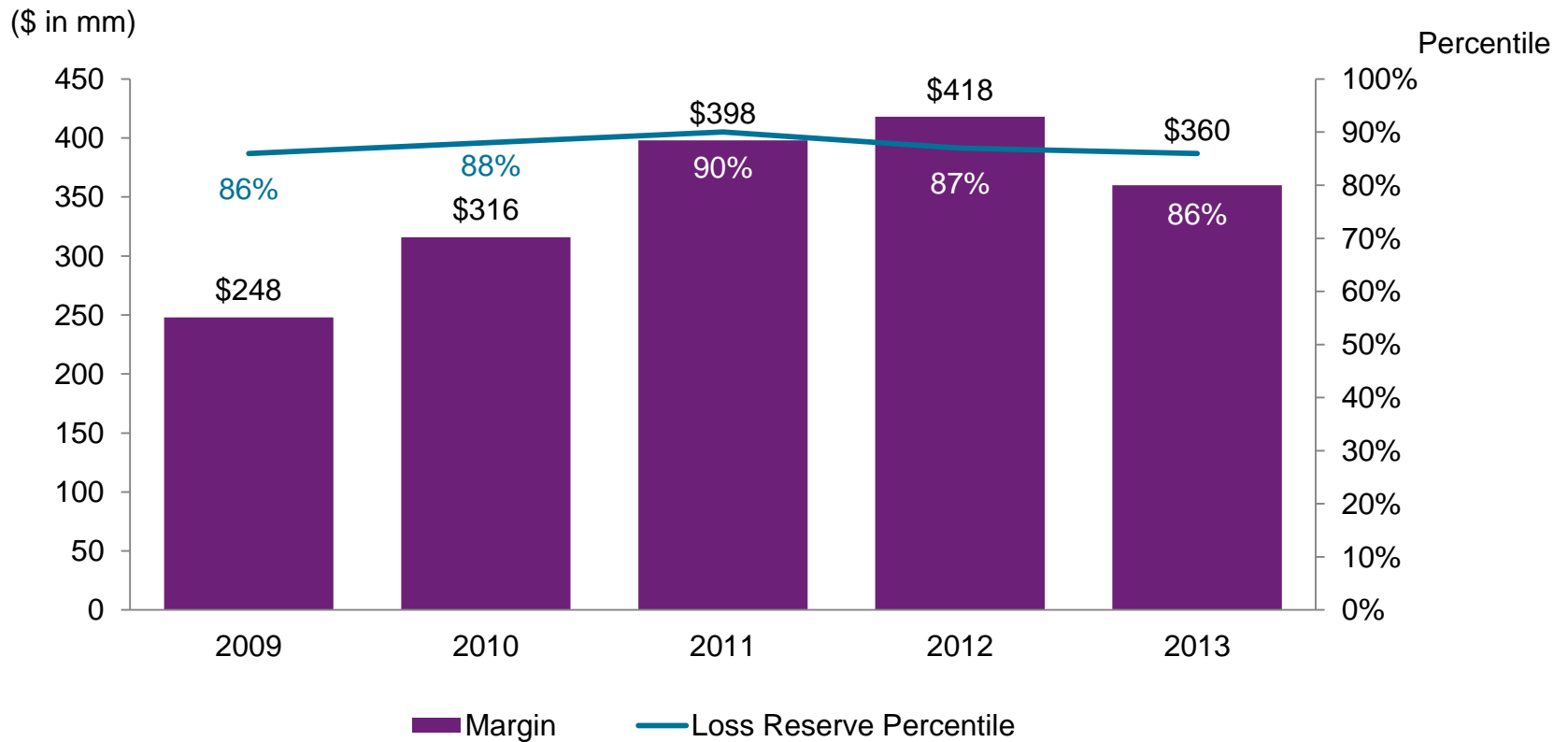


I APPENDIX



STRONG BALANCE SHEET STRONG RESERVE POSITION WITH LOSS RESERVE PERCENTILES IN THE MID-HIGH 80s

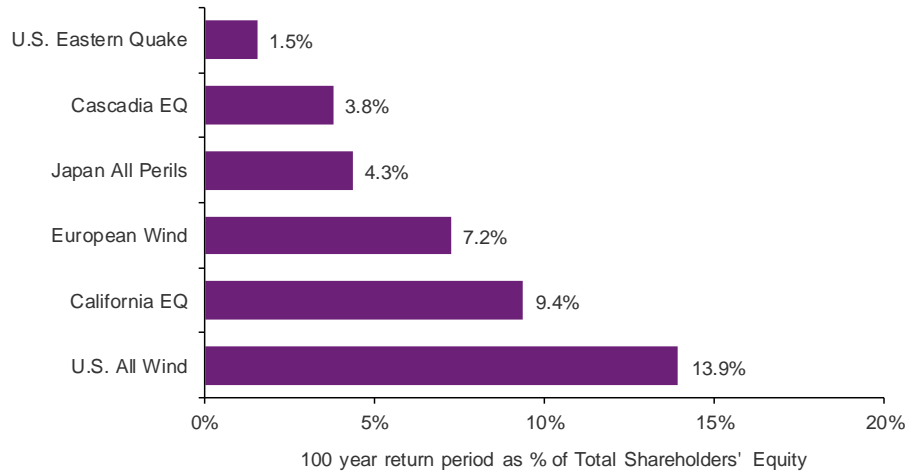
GROSS RESERVES: MARGIN ABOVE MEAN BEST ESTIMATE AND PERCENTILE





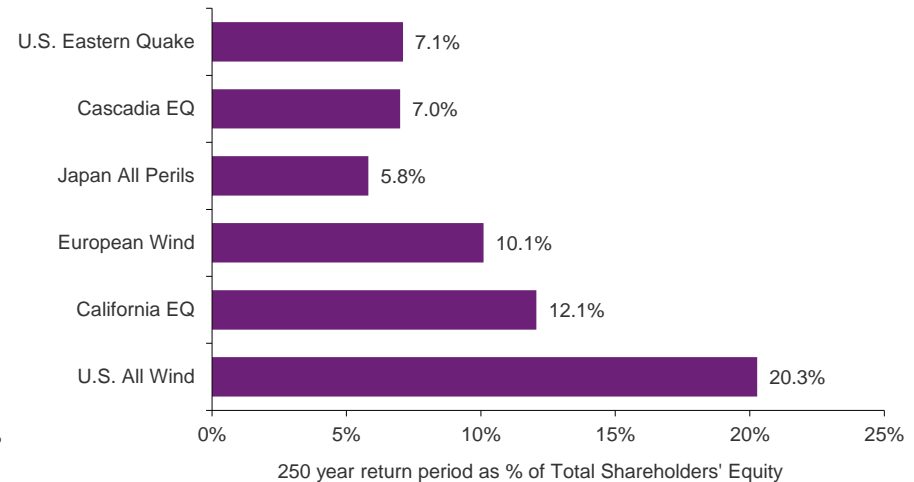
UNDERWRITING EXPERTISE: ASPEN'S NATURAL CATASTROPHE EXPOSURES IN MAJOR PERIL ZONES AS AT APRIL 1, 2014

100 YEAR RETURN PERIOD AS % OF TOTAL SHAREHOLDERS' EQUITY



1 in 100 year tolerance:
17.5% of total shareholders' equity

250 YEAR RETURN PERIOD AS % OF TOTAL SHAREHOLDERS' EQUITY



1 in 250 year tolerance:
25.0% of total shareholders' equity

Based on Shareholders' equity of \$3,387.0 million (excluding non-controlling interest) at March 31, 2014. The estimates reflect Aspen's own view of the modelled maximum losses at the return periods shown which include input from various third party vendor models and our own proprietary adjustments to these models. Catastrophe loss experience may materially differ from the modelled PMLs due to limitations in one or more of the models or uncertainties in the application of policy terms and limits. Modelled PMLs are presented net of reinsurance and retrocessional recoveries and after tax.



FINANCIAL HIGHLIGHTS: 1Q 2014

<i>(\$ in millions, except per share data and percentages)</i>	1Q 2014	1Q 2013	COMMENTS
OPTIMIZATION OF BUSINESS PORTFOLIO			
Gross Written Premiums	\$855.5	\$773.4	<ul style="list-style-type: none"> Increase primarily driven by Insurance segment, in Property and Casualty businesses, and Reinsurance segment, in Other Property and Specialty lines
Net Written Premiums	\$697.5	\$597.0	
Combined Ratio	87.6%	90.1%	<ul style="list-style-type: none"> Combined ratio reflects strong Reinsurance segment performance (72.6% 1Q 2014) and improving U.S. platform scale and profitability Combined ratio ex catastrophes: 85.7% (1Q 2014) vs. 90.1% (1Q 2013) Accident year ex catastrophe combined ratio : 90.7% (1Q 2014) vs. 95.2% (1Q 2013)
Annualized Operating ROE ⁽¹⁾	14.8%	10.8%	<ul style="list-style-type: none"> ROE and EPS growth reflect improved underwriting profitability, effective capital management through active share repurchases, and stabilizing investment income in the current low interest rate environment
Diluted Operating EPS ⁽¹⁾	\$1.55	\$1.06	
CAPITAL EFFICIENCY			
Ordinary Share Repurchases	\$30.9	\$210.2	<ul style="list-style-type: none"> \$500mm current repurchase authorization; \$193mm remaining at 1Q 2014 \$310mm ordinary shares repurchased in 2013 \$31mm ordinary shares repurchased in 1Q 2014
Diluted BVPS at Period End	\$42.72	\$40.67	<ul style="list-style-type: none"> Positive contributions from underwriting, increase in unrealized gains in the investment portfolio and ordinary share repurchases; diluted BVPS rose 4.4% from YE 2013
ENHANCING INVESTMENT RETURNS			
Book Yield on Fixed Income Portfolio at Period End	2.68%	2.80%	<ul style="list-style-type: none"> Seek to mitigate impact of continuing low interest rates through increased allocation to equities, BB-rated securities and investment grade emerging market debt Risk assets (equities, bank loans, high yield and BBB EMD) comprise 9.8% of portfolio
Average Duration of the Fixed Income Portfolio at Period End	3.2 years ⁽²⁾	3.0 years ⁽²⁾	

■ AHL: NYSE (1) See Aspen's quarterly financial supplement for a reconciliation of operating income to net income, average equity to closing shareholders' equity, and diluted book value per share to basic book value per share in the Investor Relations section of Aspen's website at www.aspen.co

(2) Includes the impact of interest rate swaps



FINANCIAL HIGHLIGHTS: 1Q 2014

(\$ in millions, except per share data and percentages)

	1Q 2014	1Q 2013	COMMENTS
REINSURANCE SEGMENT			
Gross Written Premiums	\$472.2	\$439.6	<ul style="list-style-type: none"> Increase primarily attributable to growth in Catastrophe and Other Property Lines
Combined Ratio	72.6%	78.5%	<ul style="list-style-type: none"> Includes \$5.5mm, or 2.1 percentage points, of catastrophe losses, pre-tax net of reinsurance recoveries and reinstatement premiums related to Japanese snowstorms and U.S. winter storms
Accident Year Ex-Cat Loss Ratio	47.2%	52.3%	<ul style="list-style-type: none"> Favorable prior year loss reserve development of \$21.2mm, or 7.9 combined ratio points, compared with \$20.1mm favorable prior year loss reserve development, or 7.8 combined ratio points, for the first quarter of 2013
INSURANCE SEGMENT			
Gross Written Premiums	\$383.3	\$333.8	<ul style="list-style-type: none"> Mainly attributable to continued growth from the U.S. teams
Combined Ratio	95.1%	96.8%	<ul style="list-style-type: none"> Includes \$5.1mm, or 1.7 percentage points, of net catastrophe losses, pre-tax net of reinsurance recoveries, related to U.S. winter storms and U.K. floods
Accident Year Ex-Cat Loss Ratio	59.9%	63.1%	<ul style="list-style-type: none"> Favorable prior year loss reserve development of \$7.0mm, or 2.3 combined ratio points, compared with prior year reserve favorable development of \$6.1mm, or 2.4 combined ratio points, for the first quarter of 2013

INVESTOR PRESENTATION FIRST QUARTER 2014



Aspen Insurance Holdings Limited