Endurance Specialty Holdings

Investor Presentation, December 31, 2010

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Forward looking statements & regulation G disclaimer

Safe Harbor for Forward Looking Statements

Some of the statements in this presentation include forward-looking statements which reflect our current views with respect to future events and financial performance. Such statements include forward-looking statements both with respect to us in general and the insurance and reinsurance sectors specifically, both as to underwriting and investment matters. Statements which include the words "expect," "intend," "plan," "believe," "project," "anticipate," "seek," "will," and similar statements of a future or forward-looking nature identify forward-looking statements in this presentation for purposes of the U.S. federal securities laws or otherwise. We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in the Private Securities Litigation Reform Act of 1995.

All forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or may be important factors that could cause actual results to differ from those indicated in the forward-looking statements. These factors include, but are not limited to, the effects of competitors' pricing policies, greater frequency or severity of claims and loss activity, changes in market conditions in the agriculture insurance industry, termination of or changes in the terms of the U.S. multiple peril crop insurance program, a decreased demand for property and casualty insurance or reinsurance, changes in the availability, cost or quality of reinsurance or retrocessional coverage, our inability to renew business previously underwritten or acquired, our inability to maintain our applicable financial strength ratings, our inability to effectively integrate acquired operations, uncertainties in our reserving process, changes to our tax status, changes in insurance regulations, reduced acceptance of our existing or new products and services, a loss of business from and credit risk related to our broker counterparties, assessments for high risk or otherwise uninsured individuals, possible terrorism or the outbreak of war, a loss of key personnel, political conditions, changes in insurance regulation, changes in accounting policies, our investment performance, the valuation of our invested assets, a breach of our investment guidelines, the unavailability of capital in the future, developments in the world's financial and capital markets and our access to such markets, government intervention in the insurance and reinsurance industry, illiquidity in the credit markets, changes in general economic conditions and other factors described in our most recently filed Annual Report on Form 10-K and Quarterly Reports on Form 10-Q.

Forward-looking statements speak only as of the date on which they are made, and we undertake no obligation publicly to update or revise any forward-looking statement, whether as a result of new information, future developments or otherwise.

Regulation G Disclaimer

In presenting the Company's results, management has included and discussed certain non-GAAP measures. Management believes that these non-GAAP measures, which may be defined differently by other companies, better explain the Company's results of operations in a manner that allows for a more complete understanding of the underlying trends in the Company's business. However, these measures should not be viewed as a substitute for those determined in accordance with GAAP. For a complete description of non-GAAP measures and reconciliations, please review the Investor Financial Supplement on our web site at www.endurance.bm.

The combined ratio is the sum of the loss, acquisition expense and general and administrative expense ratios. Endurance presents the combined ratio as a measure that is commonly recognized as a standard of performance by investors, analysts, rating agencies and other users of its financial information. The combined ratio, excluding prior year net loss reserve development, enables investors, analysts, rating agencies and other users of its financial information to more easily analyze Endurance's results of underwriting activities in a manner similar to how management analyzes Endurance's underlying business performance. The combined ratio, excluding prior year net loss reserve development, should not be viewed as a substitute for the combined ratio.

Net premiums written (prior to deposit accounting adjustments) is a non-GAAP internal performance measure used by Endurance in the management of its operations. Net premiums written (prior to deposit accounting adjustments) represents net premiums written and deposit premiums, which are premiums on contracts that are deemed as either transferring only significant timing risk or transferring only significant underwriting risk and thus are required to be accounted for under GAAP as deposits. Endurance believes these amounts are significant to its business and underwriting process and excluding them distorts the analysis of its premium trends. In addition to presenting gross premiums written determined in accordance with GAAP, Endurance believes that net premiums written (prior to deposit accounting adjustments) enables investors, analysts, rating agencies and other users of its financial information to more easily analyze Endurance's results of underwriting activities in a manner similar to how management analyzes Endurance's underlying business performance. Net premiums written (prior to deposit accounting adjustments) should not be viewed as a substitute for gross premiums written determined in accordance with GAAP.

Return on Average Equity (ROAE) is comprised using the average common equity calculated as the arithmetic average of the beginning and ending common equity balances for stated periods. Return on Beginning Equity (ROBE) is comprised using the beginning common equity for stated periods. The Company presents various measures of Return on Equity that are commonly recognized as a standard of performance by investors, analysts, rating agencies and other users of its financial information.

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Investor Value Proposition

Endurance offers investors a proven franchise at an attractive valuation

Successfully executed our strategy to develop a diversified portfolio of specialized business

- Specialty focus and strong diversification has the potential to generate industry leading returns for shareholders, with lower volatility over time
- Established a team of experienced specialized underwriters with deep industry knowledge across business units
- Strong balance sheet supported by conservative investment portfolio and prudent reserving practices
- Recognized industry leader in Enterprise Risk Management – Excellent rating for ERM by Standard & Poor's for the past three years
- Management team has successfully generated superior returns for shareholders

Total Return Since Endurance IPO *(March 3, 2003)**

Chubb Corp.	CB	200.3%
Arch Capital Group Ltd.	ACGL	191.5%
RLI Corp.	RLI	177.0%
ACE Ltd.	ACE	171.8%
W.R. Berkley Corp.	WRB	156.8%
Endurance Specialty Holdings Ltd.	ENH	155.4%
Alterra Capital Holdings Ltd.	ALTE	145.8%
Travelers Cos. Inc.	TRV	133.5%
RenaissanceRe Holdings Ltd.	RNR	110.4%
Platinum Underwriters Holdings Ltd.	PTP	104.0%
PartnerRe Ltd.	PRE	98.1%
Progressive Corp.	PGR	86.2%
Everest Re Group Ltd.	RE	81.0%
CNA Financial Corp.	CNA	33.6%
Allstate Corp.	ALL	22.9%
TransAtlantic Holdings Inc.	TRH	9.4%
Montpelier Re Holdings Ltd.	MRH	5.6%
Hartford Financial Services Group Inc.	HIG	-3.3%
XL Group PLC	XL	-57.7%
American International Group Inc.	AIG	-94.7%

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* Source: FACTSET: Total return equals stock appreciation plus dividends from March 3, 2003 through February 10, 2011

Introduction to Endurance Specialty Holdings

1. Currently in our tenth year operating as a specialty reinsurance/insurance company
   - Focus on specialty lines of business
   - Active portfolio management
   - Maintain a strong balance sheet and efficiently managed capital base
2. Strong Market Positioning
   - Widely diversified, global specialty insurance and reinsurance provider
   - Over 820 employees in offices across the United States, Bermuda, Europe, and Asia
3. Solid Financial Foundation
   - Excellent financial strength with $8.0 BN in assets, $3.4 BN in total capital and $2.8 BN in shareholders' equity as of December 31, 2010
     - High quality (average rating of AA), short duration (2.39 years), liquid investment portfolio
     - Prudent loss reserves (69.1% of reserves are IBNR)
   - Rated "A" by A.M. Best and Standard & Poor's and A2 by Moody's with stable outlooks
   - Received the highest Enterprise Risk Management ranking of "Excellent" from Standard & Poor's in 2008 and reaffirmed in 2009 and 2010
4. Excellent historical financial results
   - Inception to date annualized operating ROE of 14.6%
   - 23.2% average annualized growth in book value per share plus dividends since inception

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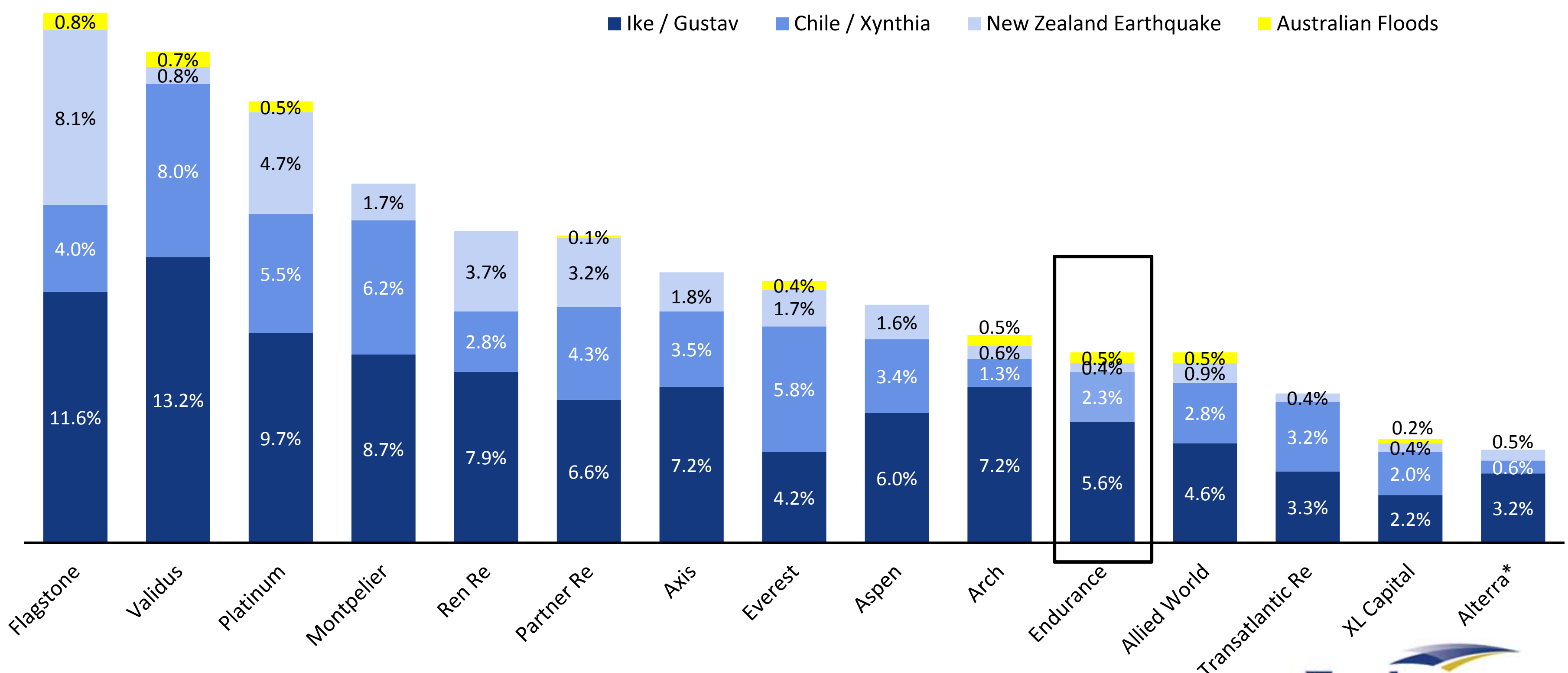
Endurance is World Class at Risk Management

Endurance has outperformed other catastrophe writers in recent large events

Industry Participant's Catastrophe Losses versus Shareholders Equity

Large named events since 2007



Source: SNL and Dowling

** Based on losses and equity reported prior to their merger*

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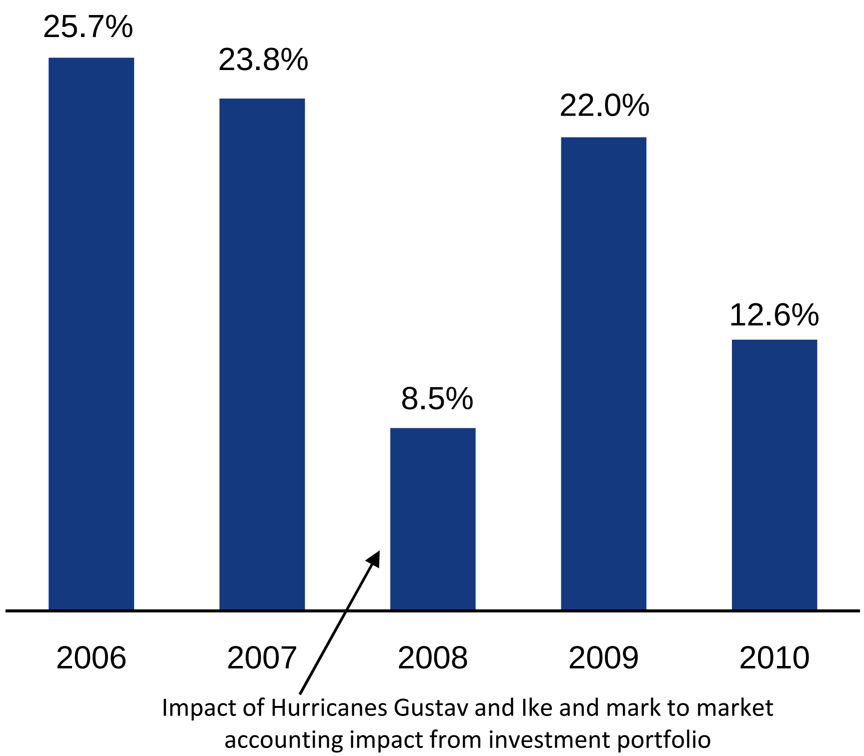
Endurance Has Generated Superb Financial Results

Growth in key metrics generates significant shareholder value

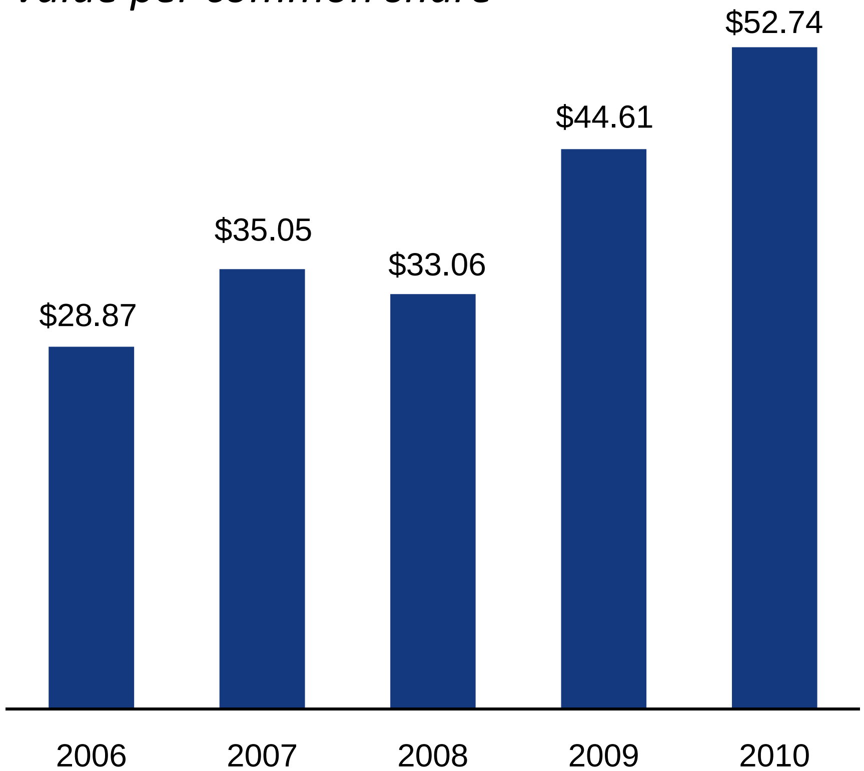
Operating ROE

*18.5% average operating ROE**



Diluted Book Value Per Common Share

*18.7% average annual growth in diluted book value per common share**



Note: Diluted Book Value Per Share calculated on weighted number of average diluted shares outstanding.

*** Calculated on a simple (non-compounded) average from December 31, 2005 through December 31, 2010.**

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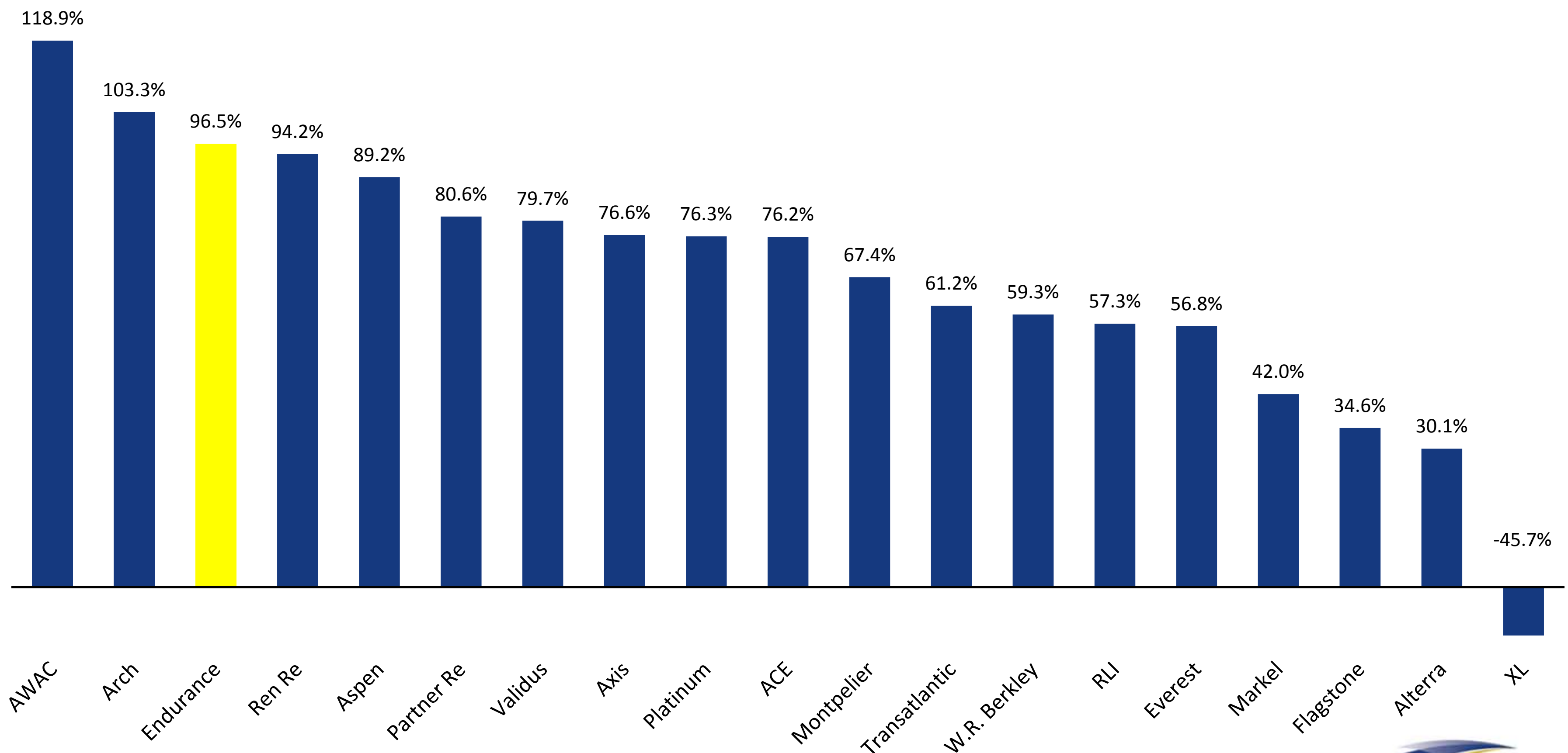
Endurance's Financial Results

Book value per common share has grown on a relative basis

Book Value Per Share Plus Dividend Growth

From December 31, 2006 – December 31, 2010



Note: Book value per share and dividend data provided by company press releases and filings

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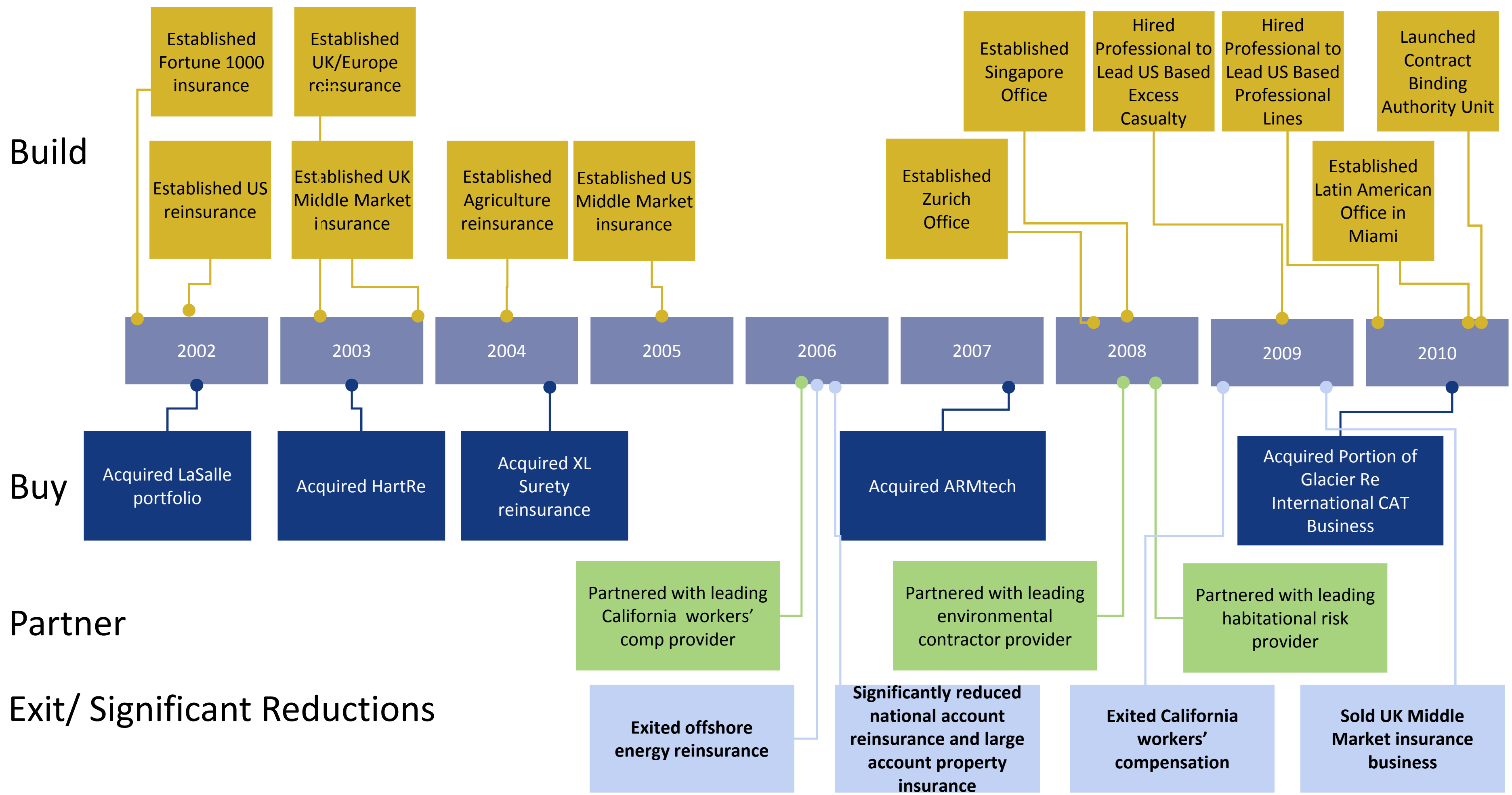
Actively Managing our Portfolio of Businesses

We have a strong track record of entering/exiting businesses to meet our strategic aims



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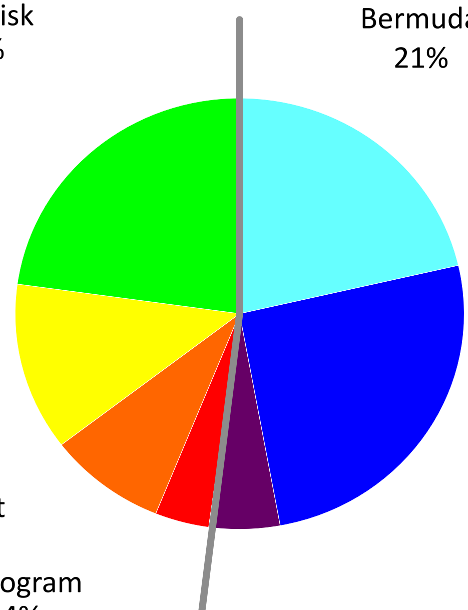
Specialty Focused, Diversified Portfolio of Businesses

Portfolio diversified by product, distribution source and geography

Full Year 2010 Net Premiums Written: $1.76 BN



Insurance - by Distribution Source

Independent Agents
- ARMtech Agriculture

Small Risk 23%

Brokers
- Healthcare
- Excess Casualty
- Professional Lines

E R S Fortune 1000 12%

Wholesale
- US Property
- US Casualty
- US Miscellaneous E&O

Middle Market 9%

Program 4%

Managing General Agents
- Habitational
- Environmental

Reinsurance – by Geographic Market

Bermuda 21%
- Aerospace
- Casualty Clash
- International Property Catastrophe
- US Property Catastrophe
- Workers' Compensation Catastrophe

US 26%
- Agriculture
- Personal Accident
- Surety
- Casualty & Workers' Compensation
- Professional Liability
- Property Per Risk
- Small Business
- Direct Treaty

International 5%
- Casualty
- Marine
- Motor
- Personal Accident
- Professional Indemnity
- Property
- Surety
- Trade Credit

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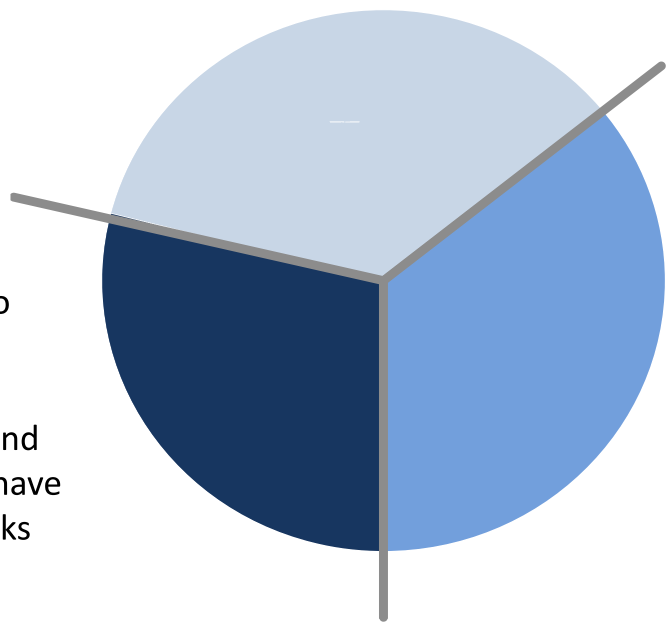
Specialty Focused, Diversified Portfolio of Businesses

Adjusted product growth and capital deployment based on market conditions

Full Year 2010 Net Premiums Written: $1.76 BN

Casualty (37%)

- Casualty reinsurance reduced 26.3% since its peak in 2006
- Casualty insurance lines of business have increased modestly since 2005 as growth in middle market U.S. based business has been partially offset by declines in Bermuda based large account business



Specialty (29%)

- Agriculture insurance is not linked to property-casualty pricing cycle
  - Growing policy count 5-7%/year
- Aerospace and marine, and surety and other reinsurance lines of business have declined significantly from their peaks

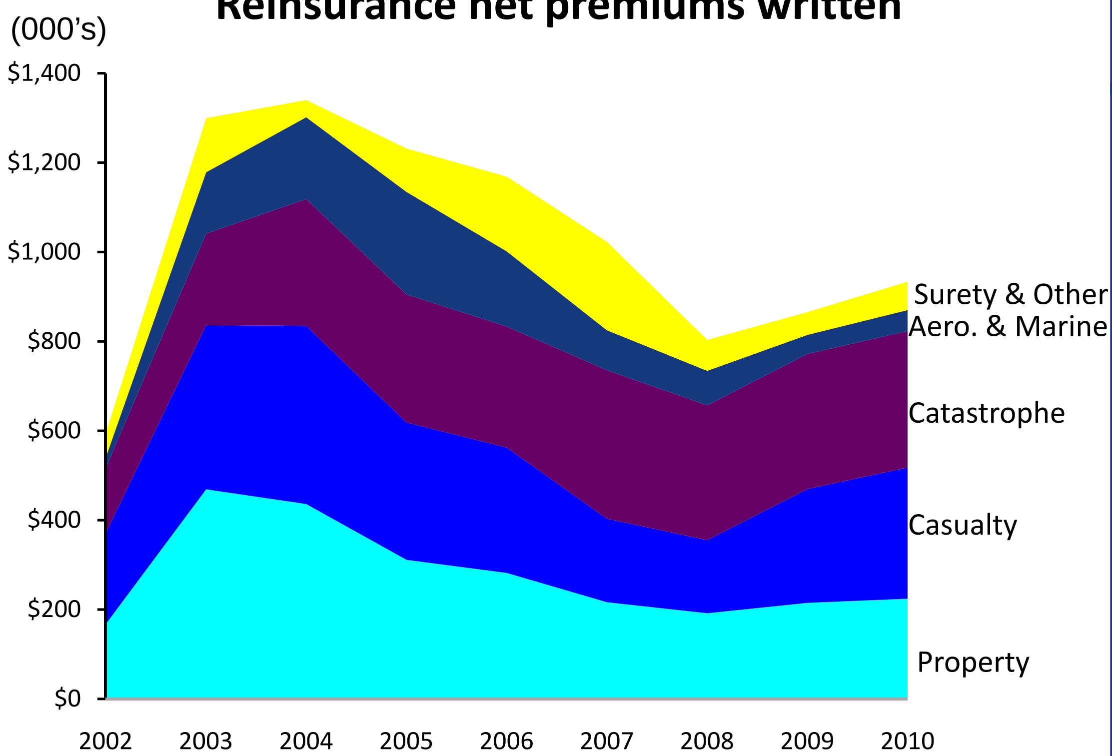
Property (34%)

- Property reinsurance has declined 37.7% since 2005 as we largely exited the national account business
- Catastrophe reinsurance has remained flat as competition has remained disciplined
- Property insurance premiums have remained flat since 2005

Disciplined Reinsurance Portfolio Management

Reinsurance book has been selectively reduced during a softening market

Reinsurance net premiums written



Managing the reinsurance portfolio

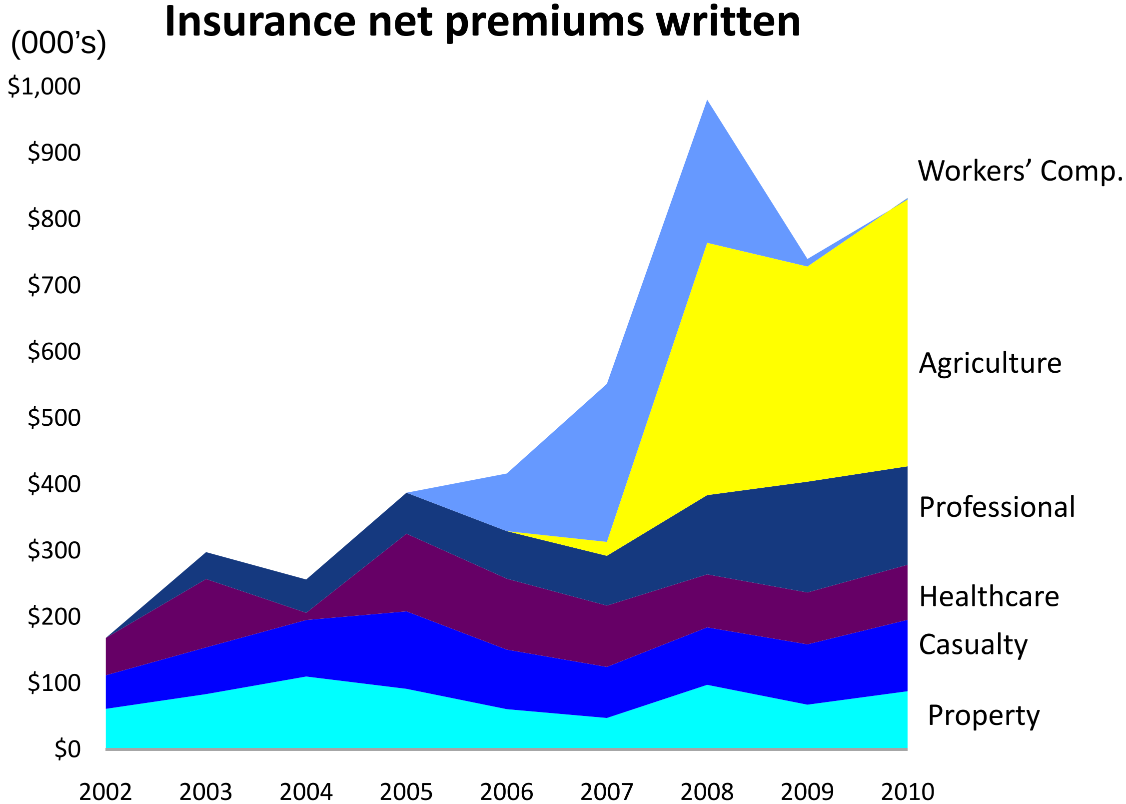
- Active portfolio management has enhanced reinsurance portfolio:
  - Lines of business have been actively reduced where pricing, terms or data quality have not met our requirements
    - Casualty has declined 26.3% from its peak
    - Property has declined 37.7% since its peak
    - Aerospace and Marine has declined 79.7% from its peak
- Catastrophe premiums have remained flat as the market has been disciplined and margins are acceptable
- We have maintained our underwriting expertise and are well positioned to grow as opportunities arise

We have demonstrated discipline in writing reinsurance business as evidenced by the overall portfolio shrinking 30.3% since our peak in 2004. We have maintained our higher margin catastrophe premiums while shrinking our longer tail lines of business and retained our ability to grow when the market turns.

Diversified Insurance Portfolio

Continue to expand insurance capabilities while maintaining discipline

Insurance net premiums written



Managing the insurance portfolio

- We have significantly broadened our insurance capabilities
  - Added agriculture line of business through the acquisition of ARMtech
  - Expanded professional lines through addition of underwriting teams and new relationships
  - Careful expansion of our U.S. Based middle market insurance operations
- Maintained pricing and relationships in large risk insurance in an increasingly competitive environment

Since 2005 we have meaningfully invested in new capabilities and expanded our distribution relationships within our insurance franchise which should position us for strong growth when market conditions become more favorable

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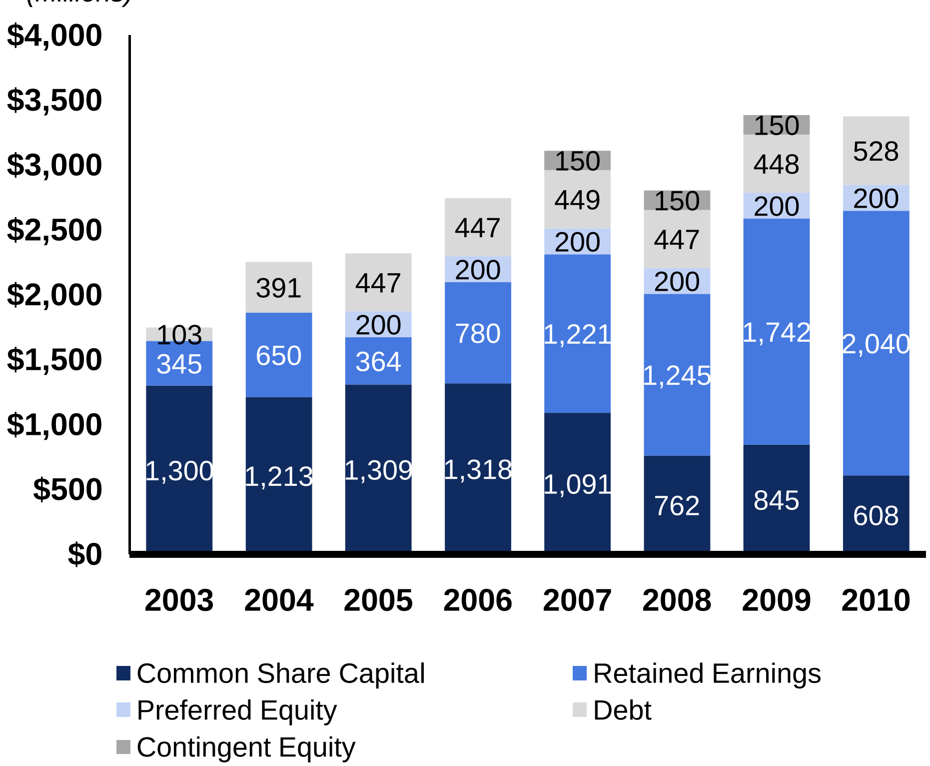
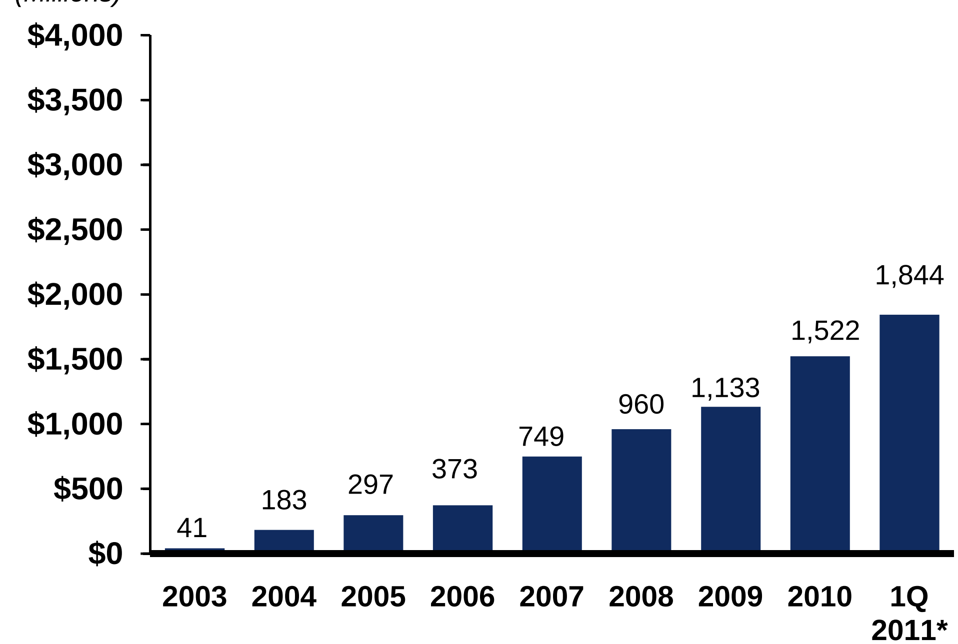
Growing Capital Base While Returning Significant Capital to Investors

From 1/2/2007 through 1/31/2011, diluted shares outstanding have declined 40.7%

Diversified and Growing Capital Base



Cumulative Capital Returned to Shareholders



Over time, Endurance has thoughtfully built its capital base, diversifying the sources and duration of capital, reducing cost of capital, while at the same time aggressively returning over $1.8 billion of capital to shareholders

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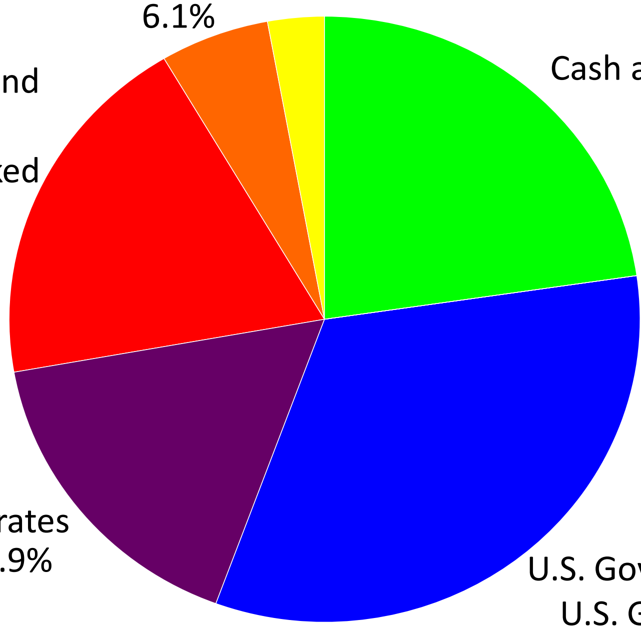
* Q1 to 1/31/2011 includes 7.1 million shares repurchased from Perry Corp. announced on January 24, 2011.

Strong Balance Sheet

Endurance maintains a high quality, short duration investment portfolio

$6.2 Billion Investment Portfolio as of December 31, 2010

52.8% of investments are either cash and short term or are U.S. issued or backed



Average Credit Quality of AA

Investment Portfolio Highlights

- We have actively reduced the duration of the investment portfolio to 2.39 years from 3.17 years in third quarter 2008
- Investment quality has remained high as the portfolio is conservatively managed
  - Alternative portfolio is approximately 6% of total investment portfolio
- Alternative assets of $376.7 million comprised of direct investments in hedge funds (70% of portfolio) and high yield loan funds (30% of portfolio)
  - Modest leverage used by hedge fund managers
  - Hedge fund strategies split between event driven/opportunistic and credit/distressed

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Conclusion

Endurance is a compelling investment opportunity

1. Strategically managing our business through the soft market
   - Selectively reduced reinsurance premiums, especially in competitive longer tail lines
   - Invested in agriculture insurance business which is not linked to the property-casualty market cycle
     - Accounts for 23% of net premiums written
   - Active capital deployment to return excess capital to shareholders
     - Reduced diluted shares outstanding by 40.7% since 1/1/2007 (includes share repurchase announced and completed in January 2011)
   - Maintain a short duration, highly liquid investment portfolio
     - Positioned to reduce potential impact of rising interest rates
2. Excellent balance sheet strength and liquidity
   - High quality short duration investment portfolio has an average credit quality of AA
   - Prudent reserving philosophy and strong reserve position; strong history of favorable development
   - Industry leading Enterprise Risk Management
3. The outlook for Endurance's key areas of specialization remain attractive
   - Agriculture business provides diversification from the property-casualty markets
   - Catastrophe lines have remained disciplined and profitable
   - Profitable niches within specialty lines exist
4. Endurance is currently trading at a discount to book, despite strong absolute and relative performance and strong market positioning

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Appendix

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Business Organization and Competitive Advantages

- Endurance
  - Insurance 47%*
    - Small Risk
    - Middle Market
    - Fortune 1000
    - Program
  - Reinsurance 53%*
    - US
    - Bermuda
    - International

Diverse mix of access to exposure, split between insurance and reinsurance, and across customer segments

Each of our businesses are led by industry leading professionals with market expertise and maintain the following sources of competitive advantage

Small Risk
- Service and technology-based distribution strategy
- Strong local presences
- Strong product development
- Cost-efficient production

Middle Market
- Professional team with extremely strong underwriting experience
- Long-term relationships (over 20 years) with key brokers
- Very strong reinsurance relationships

Fortune 1000
- Individual risk underwriting model, as opposed to market share approach
- Very low historical loss ratio based on superior underwriting
- Deep distribution management capabilities

Program
- Utilize technology to enhance control environment
- Multi-disciplined teams of professionals dedicated to program management and oversight
- Access to business through combination of insurance and reinsurance networks

US
- 3-pronged underwriting approach
  - Specialized
  - Relationship-based
  - Opportunistic
- Dedicated professional teams with skills tailored to each approach

Bermuda
- Face-to-face service model and access to global network of clients
- Industry leading underwriting margins
- Aggressive portfolio management
- Industry leading technology and modeling

International
- Distinctive footprint and lean underwriting approach vs. most Bermuda competitors
- Shifting focus of business to Zurich and Singapore
- Strong local market presence with experienced professionals

* Based on full year 2010 net written premiums

Balance Sheet Strength and Durability

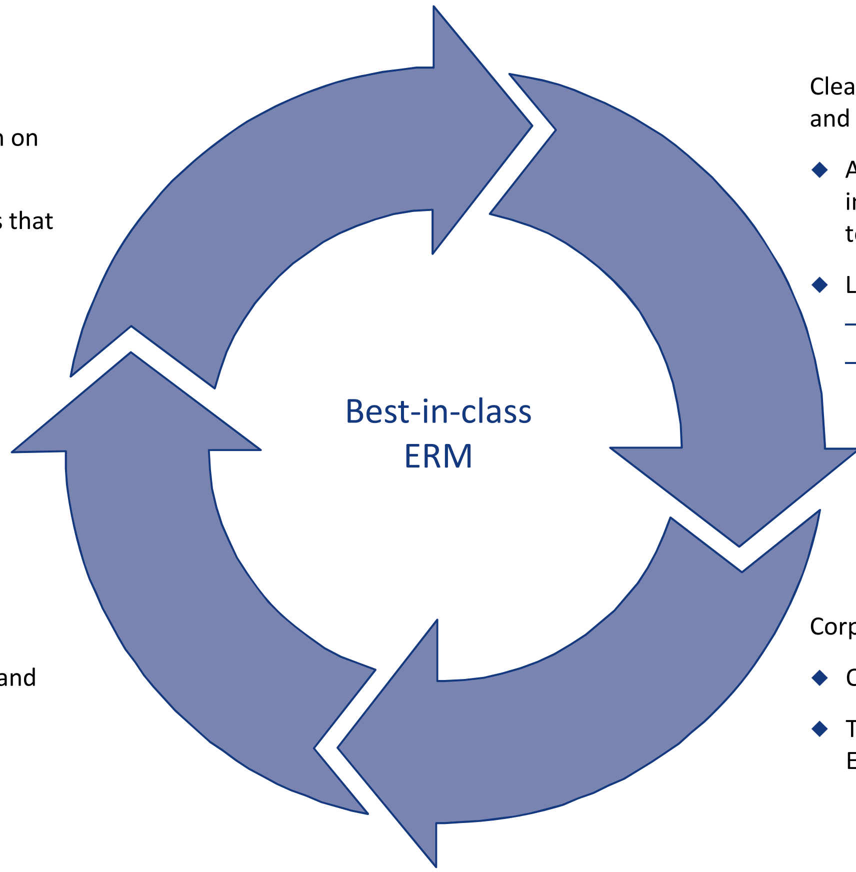
Our commitment to ERM supports superior performance

Optimally manage capital and risks

- Manage towards a required return on risk-adjusted capital
- Quantify risks taken and limit ones that threaten solvency/viability

Clearly defined risk tolerances and controls

- Asset management: approach incorporates capital-at-risk limits, stress testing and ratings triggers
- Liability management
  - Concentration management
  - Delegated authorities



Strong governance structure

- Senior management understands and values ERM as a source of competitive advantage
- Board of Directors highly skilled in insurance and finance

Corporate culture

- Ownership mentality
- Transparency and communication of ERM strategies

"Excellent" ERM rating by S&P in 2008, affirmed in 2009 and 2010
Youngest company and one of only five P&C companies in the world to achieve the highest designation

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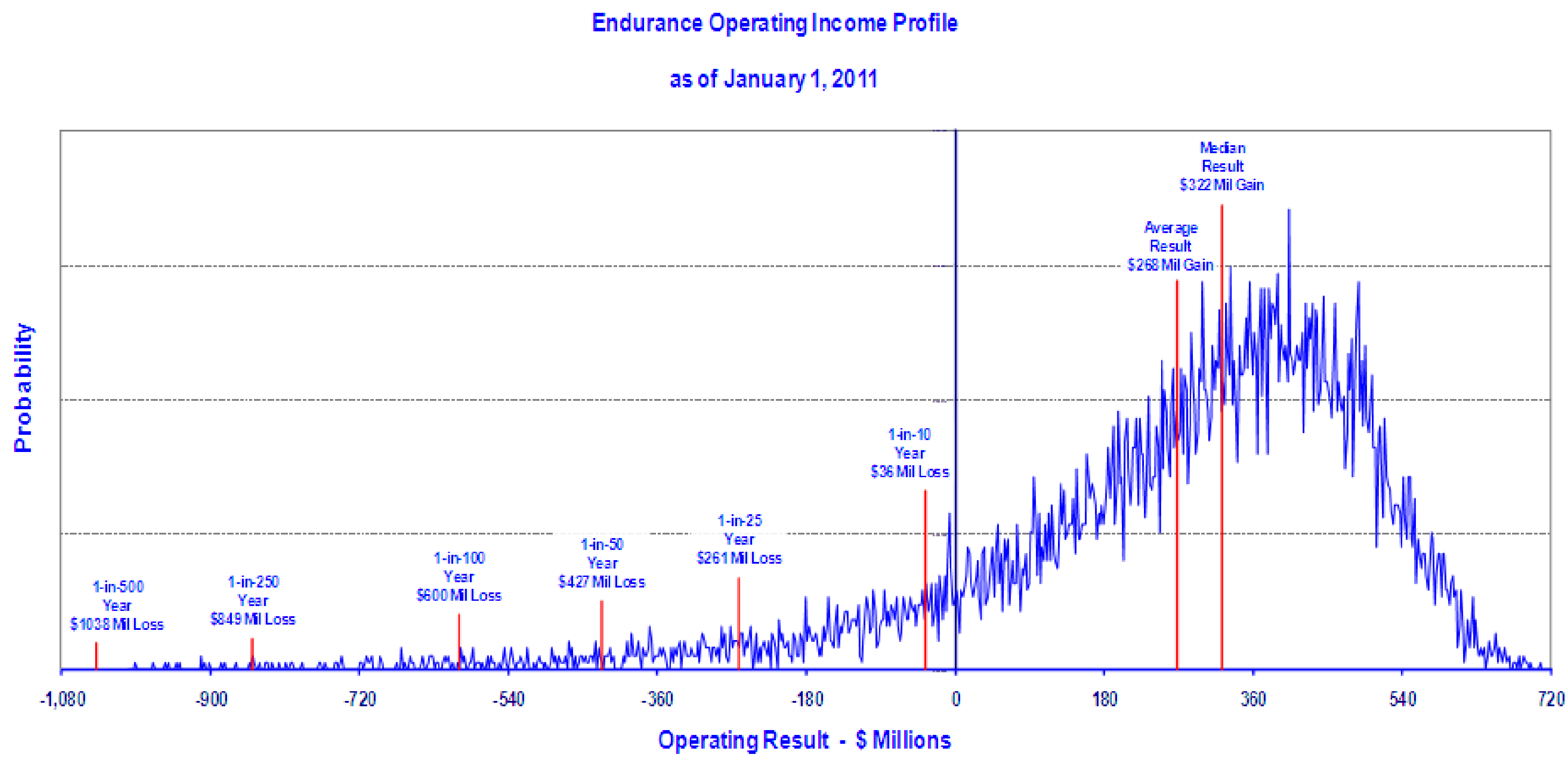
Active portfolio management

Specialty portfolio supported by extensive risk management expertise



We have managed our portfolio of risks, prudently managing our three peak catastrophe zones of U.S. Wind (regional homeowners focus with strong Florida only portfolio), California quake and European wind/flood.

The above chart represents a cumulative analysis of our in-force underwriting on a full year basis based on thousands of potential scenarios. Changes in Endurance's underwriting portfolio, investment portfolio, risk control mechanisms, market conditions and other factors may cause actual results to vary considerably from those indicated by our value at risk curve. For a listing of risks related to Endurance and its future performance, please see "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2009. See our most recent Investor Supplement for a full description of what is contained in the chart.

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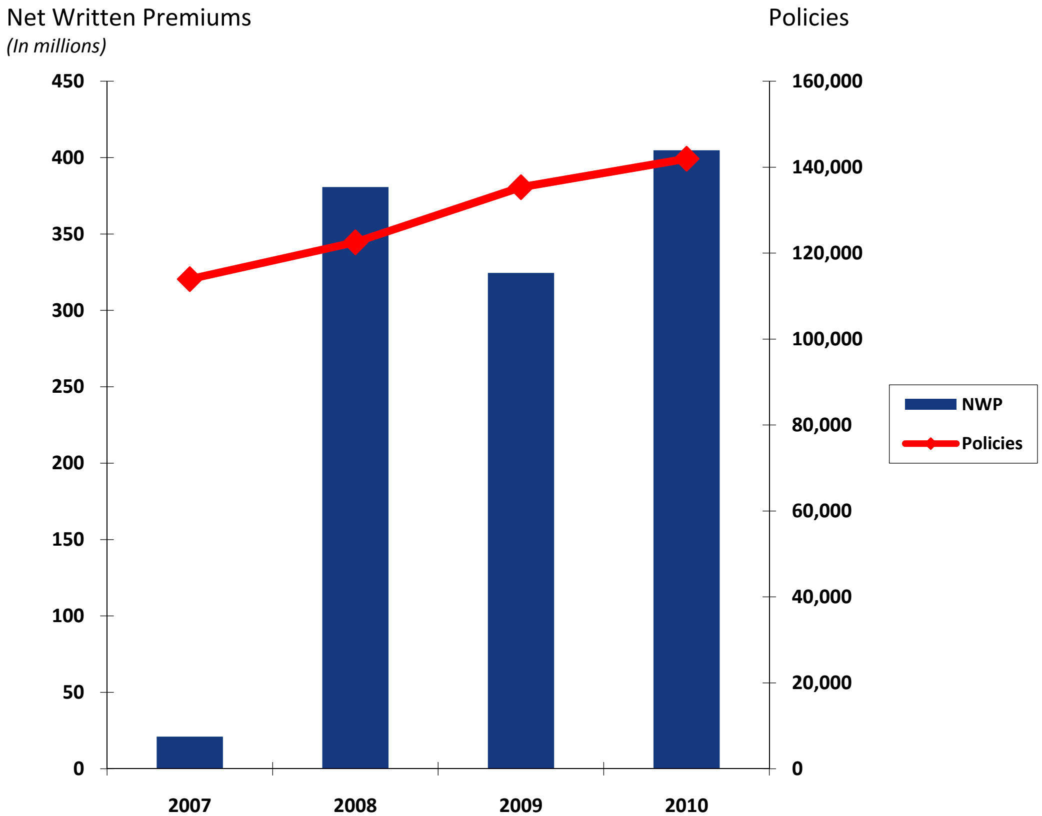
ARMtech Has Delivered Strong Results

Acquired ARMtech in late 2007 – a highly specialized crop insurance company

ARMtech NWP and Policy Counts



ARMtech Highlights

- We have significantly invested in growing AMRtech's business
  - Added marketing staff and more than doubled the claims staff which led to an expanded agent base
  - Policy counts have grown 5-7% per year
- Since the acquisition, ARMtech has earned $1.1 billion of net premiums and generated an underwriting ratio of 84.6%
- We believe changes to the standard reinsurance agreement will present a potential opportunity for ARMtech
  - Lower A&O expense reimbursement has the potential to be significantly offset by reduced ARMtech agent commissions
  - ARMtech's concentration in group 2 and 3 states expected to largely offset margin reductions in group 1 states
  - Strong technology, claims handling and compliance position ARMtech favourably following the changes to the standard reinsurance agreement

ARMtech differentiates Endurance from its peers as it provides Endurance with a stable, diversifying book of business that is not impacted by property-casualty market cycle pressures

Financial Results for Fourth Quarter 2010

Financial highlights

$MM (except per share data and %)	December 31, 2010	December 31, 2009	$ Change	% Change
Net premiums written	189.2	209.4	(20.2)	-9.6%
Net premiums earned	449.7	393.9	55.8	14.2%
Net investment income	56.9	59.3	(2.4)	-4.0%
Net underwriting income	69.8	98.9	(29.1)	-29.4%
Net income	111.2	154.8	(43.6)	-28.2%
Operating income	108.3	153.7	(45.4)	-29.5%
Fully diluted net income EPS	2.09	2.56	(0.47)	-18.4%
Fully diluted operating EPS	2.04	2.54	(0.50)	-19.7%

Key operating ratios

	December 31, 2010	December 31, 2009
Operating ROE	15.6%	23.5%
Net loss ratio	54.8%	41.6%
Acquisition expense ratio	14.7%	18.5%
General and administrative expense ratio	15.1%	14.7%
Combined ratio	84.6%	74.8%
Diluted book value per share	$52.74	$44.61
Investment leverage	2.28	2.33

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Fourth Quarter 2010 Net Written Premiums

Insurance Segment

In $MM	December 31, 2010	December 31, 2009	$ Change	% Change
Property	11.9	14.9	-3.0	-20.1%
Casualty	25.5	19.9	5.6	28.1%
Healthcare liability	9.9	9.1	0.8	8.8%
Workers' compensation	-1.3	-0.7	-0.6	85.7%
Agriculture	2.4	0.7	1.7	242.9%
Professional lines	33.2	44.5	-11.3	-25.4%
Total insurance	81.6	88.4	-6.8	-7.7%

Reinsurance Segment

In $MM	December 31, 2010	December 31, 2009	$ Change	% Change
Casualty	48.0	34.5	13.5	39.0%
Property	8.6	9.7	-1.1	-11.3%
Catastrophe	17.9	12.8	5.1	40.3%
Aerospace and marine	2.4	1.7	0.7	41.2%
Surety and other specialty	-0.4	-0.7	0.3	-42.9%
Total reinsurance	76.5	58.0	18.5	31.9%

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Financial Overview: Historical

Financial highlights from 2002 through 2010

In $MM	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002 through 2010
Net premiums written	765	1,598	1,697	1,619	1,586	1,575	1,784	1,606	1,764	13,994
Net premiums earned	369	1,174	1,633	1,724	1,639	1,595	1,766	1,633	1,741	13,274
Net underwriting income	51	179	232	-410	304	322	111	265	195	1,249
Net investment income	43	71	122	180	257	281	130	284	200	1,568
Net income before preferred dividend	102	263	355	-220	498	521	99	536	**365**	2,518
Net income available to common shareholders	102	263	356	-223	483	506	83	521	**349**	2,430
Diluted EPS	**$1.73**	**$4.00**	**$5.28**	**($3.60)**	**$6.73**	**$7.13**	**$1.31**	**$8.69**	**$6.38**	**$37.69**

Key operating ratios	2002	2003	2004	2005	2006	2007	2008	2009	2010	Inception-to-date
Combined ratio	86.2%	84.7%	85.8%	123.5%	81.5%	79.9%	93.5%	84.0%	88.7%	90.6%
Operating ROE	7.8%	17.3%	19.9%	(11.9%)	25.7%	23.8%	8.5%	22.0%	12.6%	14.6%
Book value per share	$21.73	$24.03	$27.91	$23.17	$28.87	$35.05	$33.06	$44.61	$52.74	