Equity Research
North America

Industry

Insurance - Property & Casualty

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US Strategist Weight	19.6%
S&P 500 Weight	20.6%

PLAINTIFF'S EXHIBIT 647

Industry Overview

January 31, 2003

Reserving Toolkit: In Search of the Holy Grail

- **Reserve adequacy remains key to balance sheet strength and earnings integrity.**
  We present three methods that analysts may find helpful in their quest for the holy grail of insurance analysis: uncovering the "real" (in)adequacy of loss reserves.
- **Analyzing reserve ratios is akin to navigating a minefield.**
  The analyst is better off, in our view, if he uses a map, no matter how tattered and torn. However, reserving ratios can be difficult to interpret or downright misleading. Consequently, the risk of stepping on a landmine is always present.
- **We estimated a $120 billion shortfall at YE01.**
  Reserving actions in calendar year 2002 have probably lowered that figure by $15 billion or more. However, we think reserve issues an important source of differentiation between 'winners' and 'losers' in the insurance space.
- **Industry View: In-Line**
  With sustained pricing, yet moderate valuations, book value growth should provide attractive returns.

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Reserving Toolkit: In Search of the Holy Grail

Summary and Investment Conclusion

Investors in insurance companies need little convincing that reserve integrity is a principal driver of valuation. The list of (re)insurers that have reported book value of $X on one day, and some fraction of that the next (after a "one-time" reserve *strengthening*) is too long to list here. As we move through 4Q02 earnings season, we wanted to provide investors with a few tools that could be useful in the never-ending search for the holy grail of insurance analysis—uncovering the true reserve position of a company.

We have expressed our view that the 4Q02 may bring a number of "kitchen-sink" charges. (see *Lumps of Coal from Non-Life Insurers?* December 27, 2002 and *2003 Outlook: Looks Like "Goldilocks" Not "Nirvana"* January 13, 2003) With an estimate for the industry reserve shortfall at $120 billion at year-end 2001, its no surprise that we continue to see reserve adequacy as an important source of earnings volatility. However, we also see the magnitude of those charges diminishing going forward. Through some combination of reserve charges and conservative current-year accruals, we see the stronger industry players clawing their way back to something that resembles reserve adequacy. Weaker insurers, on the other hand, may find it difficult to grow book value, as holes from past losses prove too big to fill in a more moderate upturn, despite the favorable rate environment.

Our toolkit can be considered a form of financial triage. We include three ways for investors to think about assessing loss reserves. We first presented these ideas at our recent Insurance Industry New Analysts Conference (held January 9, 2003 in New York City). Also, we expect to hold a separate seminar on the assessment of reserve adequacy this spring (also in NYC). More details will follow, but our goal will be to jump on the 2002 annual statement blanks while they are still warm, and combine a reserve teach-in with a first cut at reserve adequacy at year-end 2002.

A Quick Look Back

Before taking two steps forward, we will first take a quick step back. The table following shows our estimate of the industry's "real" capital position at the close of the third quarter.

Exhibit 1

Recap of Surplus at September 30, 2002

	$, Billions	NPW/Sp[1]	Resv/Sp
Statutory Surplus, 9/30/02	273.3	1.37	1.40
Estimated Reserve Shortfall at 12/01			
"Core" Reserve Deficiency	(56.0)		
A&E Shortfall	(55.0)		
WTC Shortfall	(9.0)		
Subtotal	(120.0)		
Estimated Reserve Additions in 2002[2]	7.0		
Estimated Reserve Shortfall at 9/02	(113.0)		
Estimated "Real" Surplus at 9/02	199.9	1.87	1.92

[1] NPW through 3Q02, annualized to approximate full year.

[2] Includes charges of all types: from core reserves, A&E, 9-11.

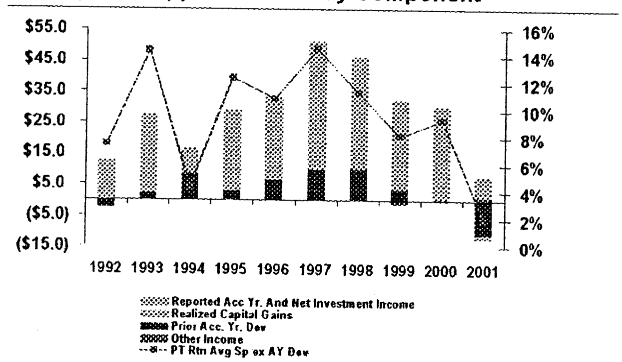
Source: ISO and Morgan Stanley Research.

Clearly, the industry's net worth, as well its operating leverage, is highly dependent on the subjective assessment of loss reserve adequacy. Those knowledgeable of actuarial "science" can attest that seemingly miniscule differences in loss development factors (e.g., 1.45 versus 1.50) may equate to millions, or even billions of dollars in reserves.

Bearing that in mind, and recognizing that our own work is exposed to many of the same pitfalls, we present two views of the industry's historical income statement.

Exhibit 2

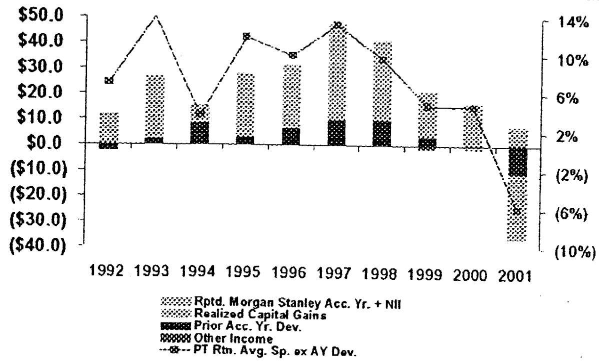
History Unwrapped: Income by Component



Source: AM Best Co. and Morgan Stanley Research

In Exhibit 2, the importance of realized gains and favorable reserve development in calendar years 1997 and forward is obvious. In Exhibit 3, we recast the industry's income over the same period, replacing the *reported* underwriting results with Morgan Stanley's estimate of the ultimate underwriting results for each year.

Exhibit 3
History Recast: Historical Income by Component



Source: AM Best Co. and Morgan Stanley Research

Had the industry reserved at the levels we are indicating, it would have reported almost no income, but for realized capital gains, in the years since 1997. It is interesting to think about whether stocks would have reached the peaks they did in 1998, and the pricing cycle would have reached the depths it did in 1999, if the numbers had been reported this way. Loss reserve adequacy is clearly an integral component of insurance valuation, and these numbers illustrate why we emphasize transparency so strongly as a factor (for better or, in our view, usually, worse) in the industry's underwriting behavior.

The Toolkit

Reserve analysis is definitely more art than science, in our view. With that in mind, we offer three levels of evaluation an insurance analyst might consider to assess the reasonableness of an insurer's reported loss reserve position. We can not state emphasize enough—*the most careful application of these and virtually any other quantitative technique for evaluating loss reserves may still prove inadequate in uncovering reserve deficiencies.* We strongly suggest that analysts use the results of these techniques to primarily question or challenge insurers and supplement common sense.

Level 1 Analysis: Triage

The first, and easiest level of analysis, involves a number of ratios that some may already be using to detect reserving issues. We briefly discuss five ratios that can be employed in the quest for the Holy Grail of insurance. But, be wary, sometimes the simple techniques lead to overly simplistic conclusions.

Our five ratios use the major financial statements (B/S, C/F and I/S) and rely on calendar year data available at each quarter end. They are, in no particular order, 1) IBNR/earned premiums; 2) IBNR/paid losses, 3) IBNR/incurred, or reported losses; 4) total reserves/paid losses; and 5) total reserves/earned premiums.

Few companies relish the thought of explaining the volatility or trends in these ratios. In some cases, this is for very good reasons—there is no meaningful conclusion to be drawn, either for the company in a time-series analysis, or when measured against peers (cross-sectional analysis). However, the use of these ratios as a means of assessing the reasonableness of loss reserves received a boost in 2002 with the publication of an actuarial paper: "Testing The Reasonableness of Loss Reserves: Reserve Ratios," by C.K. Stan Khury, FCAS. Subject to the caveats already noted (and more), the paper concludes these ratios are relevant in assessing the reasonableness of loss reserves. The paper will be subject to a formal peer review process in 2003.

Exhibits 5-9 show the results of our analysis for each of the five ratios. We have calculated the ratios using annual statement data for most of the companies in our universe. For those companies where U.S. operations represent the bulk of the company's business, the statutory data and subsequent comparisons across companies are generally adequate. However, in some cases, such as with ACE and XL, the U.S. operations may only be a minority part of the company, and comparisons, either in time-series or against peers, may not be valid. Importantly, we could show the ACE and XL ratios as taken from the financial statements under GAAP. However, we would then have the problem of potential inconsistencies with the statutory data used in constructing the other ratios. **The important point is that the ratios and peer groups should be planned carefully in advance to minimize inconsistencies across companies.**

Data Availability. The five ratios require two data elements for the numerators: incurred but not reported (IBNR) loss reserves, and total loss reserves. The denominators use three variables: earned premiums, paid losses and incurred losses. A word on each data element:

IBNR Reserves: A balance sheet item that may not be split separately from case reserves (i.e., the company may only show total reserves on its balance sheet). If IBNR cannot be found in the footnotes, either the company will have to provide it or annual statement data would need to be used.

Total Reserves: This is available in all GAAP and statutory filings. Be careful to subtract reinsurance recoverables from the GAAP reserve figure (or, use total reserves gross of reinsurance for all time periods and companies under evaluation). One small issue will be that companies are often inconsistent in their treatment of reinsurance recoverables on paid vs. unpaid claims (some show the breakout, others not). You can either make a judgmental correction if it seems warranted, or simply note the difference and move on.

Earned Premiums: This income statement item should cause the fewest problems of all items. Avoid counting life insurance premiums if that is an issue, but otherwise the number should be clean.

Paid Losses: This item is often only available from the company (it is usually requested and provided on conference calls). The number may sometimes appear in footnotes or quarterly earnings releases.

Incurred Loss: This income statement item is readily available, though care must be taken to ensure that the components of incurred loss remain the same across time and across companies.

One last point on the data—all loss measures should treat loss adjustment expenses similarly. What matters most is not whether loss expenses are in or out (they generally will be included), but rather that consistency is maintained throughout. For this, and other reasons, we prefer statutory data to GAAP data. For example, the statutory loss fields are more consistently defined than their GAAP counterparts.

Our review of the ratios in Exhibits 5-9 led to the following observations:

- There seems to us to be more value in the time series analysis than in the cross-sectional views. Moreover, we don't think it likely that credible reserve estimates can be drawn from this level of analysis. Rather, we should be looking for trends, including possible inflection points that might give insight to directional reserving changes.
- Similarly, seemingly moderate changes in mixes of business can cause consistent differences in ratios across companies.
- Although we were prepared to warn of the changes the hard market will cause for the two premium-based ratios, the opposite appeared to be true. The premium-based ratios show surprisingly more stability than the ratios using paid and incurred losses in the denominator. This trend may, or may not, continue as rate hikes build into the earned premiums.
- Use as many of the ratios as possible—each tells a slightly different story.
- The ratios and their trends should be considered in the context of the company's overall business position. Additional considerations include: changes in premium growth rates, the company's overall results (better, or worse than peers), management changes or notable new product sales, changes in reinsurance programs, etc.

On balance, we think these ratios a useful means of triaging a company's loss reserves. When coupled with other observations about business performance (not least, its reserving track record), they can provide a useful starting point for assessing trends in reserve strength.

Level 2 Analysis: Pre-Operative Exam

The Level 1 analysis compacted all of the information from these ratios into one data point each calendar year. Our second level analysis uses the same five ratios, but focuses on analyzing trends by calendar/accident year (that is, using actuarial triangles). The second method, to us, strikes a reasonable compromise between the composite ratios of the first level and the detailed analysis from the third level (more to follow). We think this is worth the extra effort.

Exhibits 10-14 show the industry results (all lines of business combined) on triangles with a traditional actuarial orientation (that is, accident years in the rows and development years in columns). Again, the orientation is not vital, so long as the data and comparisons across companies are consistent. Moreover, the ratios are extremely flexible. One can review data in the aggregate for peer companies by lines of business. Here, peer comparisons become more relevant because the focus is on the line of business being analyzed. The reader may want to take a few minutes to review the results before finishing this section.

Our review of the ratios in Exhibits 10-14 led us to the following observations:

- The ratios using paid or incurred losses in the denominator appear to be more stable when viewed on this calendar/accident year basis (recall the volatility in Level 1). This gives the sense that all five ratios could hold meaningful insights into reserve trends.

- The most apparent weaknesses appear when reviewing the results by stage of development (that is, down columns). Across the industry, accident years subsequent to 1997 show steady reserve deterioration at their first report.

- Finite reserve covers can distort the ratios and may invalidate comparisons (either in time series or against peers). For example, if a company is a heavy user of finite reserve covers, ratios that include IBNR will probably show a clear and easily identified break at a single point in time. In our view, if a company is a heavy user of finite covers, the onus should be on the company to prove that it is adequately reserved rather than the other way around.

- Backtesting indicates that these ratios are very useful for spotting adverse trends. We looked at a number of companies that took large reserve charges in 2001 and 2002. In virtually every case, a review of these metrics coupled with industry insights would have raised a number of red flags.

- Deconstructing the algebra behind these metrics, the ratios are actually variations of standard actuarial techniques. By using ratios that are easy to understand and interpret, this actuarial pill becomes a bit easier to swallow.

We think that the ratios in this calendar/accident year format should be of great interest to investors. Again, they may only be a marker on the path to the Holy Grail, but they represent an important improvement over the level one analysis. The drawback, of course, is that the ratios require annual statement data and they are more time consuming to construct if they have to done by hand. We will plan to publish these ratios for companies in our universe once 2002 data becomes available (in the May/June timeframe).

Level 3 Analysis: Surgery

At this point, the path to the Holy Grail becomes much harder to traverse. The only analysis left to be done is an actuarial manipulation of the data in the annual statement. However, this data only lends itself to the most straightforward of actuarial analyses, and with modest training most investors could design spreadsheets that perform the basic algorithms.

We expect that for many, the benefit/cost ratio will have begun to move noticeably toward the unfavorable zone once the additional work of level 3 is considered. However, for the brave of heart there is much to be gained from the additional work. Among the benefits are: loss ratios by line of business and in the aggregate (useful for profitability/rate analyses and trending purposes), reserve shortfalls/redundancies by line of business that could have implications for competitive behavior, cash flow patterns useful for gauging asset liability management and projecting investable assets, and of course, a means by which to adjust book value and consider capital adequacy and potentially rating actions or capital raising.

As noted earlier, we expect to hold a conference this spring in which we'll discuss all of these topics. We definitely cannot promise that investors will walk away knowing all of the answers to the issues cited above (that truly would be the Holy Grail, and we'd need to charge for that). However, we do expect to take away some of the mysteries surrounding the loss reserving process and actuarial techniques. Our goal is to further the evolution of transparency in this industry and to put some tools in the hands of investors at the same time.

In the meantime, we include below a list of the insurers we follow that make their annual statement (aka the "yellow book" or "stat blank") available on their web site. Gleaning data from these pdf files will require manual effort, but the ratios in exhibit 5-14 can all be constructed from the major financial statements and Schedule P parts 1,2,3 and 4 Summary (for all lines of business combined). We hope more insurers will choose to make their 2002 filings available this way.

Exhibit 4

Companies Posting Statutory Financial on Web site

Company	Statutory Statement Available	
	Quarterly	Annual
ACE Ltd.	No	No
AIG	No	No
Allstate	No	Yes
AMBAC Inc.	Yes	Yes
Aon Corp.	No	No
Arthur J. Gallagher	No	No
Berkshire Hathaway	No	No
Chubb Corp	No	No
Cincinnati Financial	No	No
CNA Financial	No	Yes
Everest Re	No	No
Hartford Fncl.	No	No
IPC Holdings	No	No
Markel Corp	No	No
Marsh & McLennan	No	No
Max Re Capital	No	No
MBIA	No	Yes
Mercury General	No	No
Montpelier Re	No	No
Odyssey Re Hldgs	No	No
PartnerRe	No	No
Progressive	No	No
Renaissance Re	No	No
SAFECO	No	Yes
St. Paul Cos.	No	Yes
Travelers PC	No	No
W.R. Berkley	No	No
Willis Group Hldgs	No	No
XL Capital	No	No

Source: Morgan Stanley Research

Exhibit 5

Ratio One: IBNR/ Earned Premium

	2001	2000	1999	1998	1997
Diversified Companies					
ACE INA Group	119%	130%	154%	172%	182%
AIG	47%	54%	63%	63%	68%
Berkshire Hathaway Insurance Group	85%	89%	88%	94%	97%
Cincinnati Financial	30%	36%	31%	33%	34%
Hartford Financial	85%	71%	79%	85%	88%
Travelers P&C	86%	93%	100%	107%	122%
XL America Group	159%	195%	178%	139%	127%
AM Best Aggregation - Commercial Lines	55%	57%	64%	68%	71%
Specialty					
C NA Insurance Companies	76%	73%	81%	91%	91%
Chubb Group	75%	79%	83%	81%	79%
Markel Group	66%	64%	88%	87%	84%
Philadelphia Consol.	27%	25%	29%	38%	39%
St. Paul Cos.	68%	72%	90%	74%	74%
W.R. Berkley	42%	43%	51%	54%	61%
AM Best Aggregation - Commercial Lines	55%	57%	64%	68%	71%
Personal Lines					
Allstate	11%	12%	13%	12%	14%
Mercury General	9%	9%	7%	5%	7%
Progressive	7%	7%	6%	7%	8%
SAFECO	24%	23%	24%	29%	28%
AM Best Aggregation - Personal Lines	18%	18%	19%	20%	19%
Reinsurance					
Everest Re	76%	171%	151%	171%	132%
Odyssey Re Holdings	70%	96%	117%	124%	144%
Partner Re	49%	67%	76%	69%	68%
Renaissance Re	508%	818%	95%	81%	37%
Transatlantic	63%	71%	100%	114%	126%
Trenwick Group	97%	109%	159%	116%	121%
AM Best Aggregation - Reinsurance	110%	114%	122%	140%	135%
Others of Interest					
Zurich/Farmers Group	23%	25%	29%	30%	24%
Liberty Mutual Group	41%	47%	56%	55%	64%
Lumbermens Mutual Group (Kemper Ins. Cos.)	39%	25%	35%	45%	48%
Fireman's Fund	59%	64%	72%	82%	92%
State Farm Group	14%	14%	12%	12%	11%
American Re	89%	80%	94%	115%	121%

All data taken from the most relevant statutory filing available (e.g., consolidated group filing or lead US company as situation dictates).

For some, statutory data may not capture bulk of business and offshore intercompany reinsurance may distort the trend.

Source: AM Best Co. and Morgan Stanley Research.

Exhibit 6

Ratio Two: IBNR/ Paid Loss

	2001	2000	1999	1998	1997
Diversified Companies					
ACE INA Group	132%	71%	127%	143%	156%
AIG	52%	59%	68%	79%	89%
Berkshire Hathaway Insurance Group	130%	126%	121%	132%	147%
Cincinnati Financial	44%	52%	47%	48%	54%
Hartford Financial	78%	98%	103%	118%	130%
Travelers P&C	107%	117%	121%	136%	163%
XL America Group	133%	92%	176%	220%	1202%
AM Best Aggregation - Commercial Lines	64%	68%	77%	88%	97%
Specialty					
C NA Insurance Companies	49%	71%	75%	109%	101%
Chubb Group	109%	131%	116%	136%	155%
Markel Group	120%	119%	117%	137%	159%
Philadelphia Consol.	65%	56%	60%	116%	121%
St. Paul Cos.	80%	73%	107%	90%	100%
W.R. Berkley	60%	57%	74%	90%	109%
AM Best Aggregation - Commercial Lines	64%	68%	77%	88%	97%
Personal Lines					
Allstate	14%	15%	17%	17%	19%
Mercury General	14%	13%	10%	9%	12%
Progressive	11%	9%	9%	10%	12%
SAFECO	30%	30%	31%	39%	37%
AM Best Aggregation - Personal Lines	22%	23%	24%	26%	25%
Reinsurance					
Everest Re	96%	124%	205%	260%	304%
Odyssey Re Holdings	85%	89%	106%	137%	216%
Partner Re	78%	146%	93%	82%	99%
Renaissance Re	43%	102%	31%	80%	32%
Transatlantic	92%	83%	137%	179%	206%
Trenwick Group	104%	91%	151%	138%	195%
AM Best Aggregation - Reinsurance	135%	142%	160%	196%	235%
Others of Interest					
Zurich/Farmers Group	26%	29%	40%	45%	32%
Liberty Mutual Group	42%	49%	60%	65%	75%
Lumbermens Mutual Group (Kemper Ins. Cos.)	44%	27%	39%	62%	72%
Fireman's Fund	72%	55%	82%	95%	121%
State Farm Group	15%	16%	15%	15%	15%
American Re	118%	104%	119%	166%	226%

All data taken from the most relevant statutory filing available (e.g., consolidated group filing or lead US company as situation dictates).
For some, statutory data may not capture bulk of business and offshore intercompany reinsurance may distort the trend.
Source: AM Best Co. and Morgan Stanley Research.

Exhibit 7

Ratio Three: IBNR/ Incurred Loss

	2001	2000	1999	1998	1997
Diversified Companies					
ACE INA Group	137%	122%	143%	208%	192%
AIG	57%	70%	81%	80%	86%
Berkshire Hathaway Insurance Group	80%	102%	102%	133%	138%
Cincinnati Financial	40%	43%	43%	44%	50%
Hartford Financial	111%	97%	107%	116%	119%
Travelers P&C	108%	126%	139%	150%	173%
XL America Group	113%	154%	193%	212%	193%
AM Best Aggregation - Commercial Lines	62%	73%	83%	88%	98%
Specialty					
C NA Insurance Companies	61%	94%	92%	112%	118%
Chubb Group	93%	118%	116%	121%	119%
Markel Group	90%	86%	114%	121%	128%
Philadelphia Consol.	45%	44%	48%	72%	74%
St. Paul Cos.	68%	104%	126%	86%	102%
W.R. Berkley	50%	57%	65%	76%	92%
AM Best Aggregation - Commercial Lines	62%	73%	83%	88%	98%
Personal Lines					
Allstate	14%	16%	18%	18%	19%
Mercury General	13%	12%	10%	9%	11%
Progressive	10%	8%	8%	10%	11%
SAFECO	28%	28%	30%	40%	39%
AM Best Aggregation - Personal Lines	21%	22%	24%	26%	26%
Reinsurance					
Everest Re	94%	278%	187%	204%	163%
Odyssey Re Holdings	86%	132%	135%	178%	158%
Partner Re	55%	79%	98%	87%	94%
Renaissance Re	-777%	198%	73%	43%	50%
Transatlantic	71%	96%	127%	152%	169%
Trenwick Group	115%	123%	155%	202%	197%
AM Best Aggregation - Reinsurance	96%	130%	143%	189%	188%
Others of Interest					
Zurich/Farmers Group	26%	30%	38%	39%	33%
Liberty Mutual Group	40%	52%	62%	61%	76%
Lumbermens Mutual Group (Kemper Ins. Cos.)	47%	35%	49%	68%	77%
Fireman's Fund	56%	71%	86%	103%	118%
State Farm Group	15%	15%	15%	15%	15%
American Re	79%	93%	109%	168%	176%

All data taken from the most relevant statutory filing available (e.g., consolidated group filing or lead US company as situation dictates).

For some, statutory data may not capture bulk of business and offshore intercompany reinsurance may distort the trend.

Source: AM Best Co. and Morgan Stanley Research.

Exhibit 8

Ratio Four: Total Reserve/ Earned Premium

	2001	2000	1999	1998	1997
Diversified Companies					
ACE INA Group	278%	307%	343%	402%	426%
AIG	136%	156%	182%	183%	180%
Berkshire Hathaway Insurance Group	208%	183%	193%	205%	197%
Cincinnati Financial	114%	119%	116%	119%	122%
Hartford Financial	203%	175%	191%	203%	205%
Travelers P&C	197%	213%	232%	250%	277%
XL America Group	414%	439%	331%	242%	225%
AM Best Aggregation - Commercial Lines	163%	169%	183%	187%	190%
Specialty					
C NA Insurance Companies	231%	225%	218%	228%	230%
Chubb Group	173%	173%	179%	185%	177%
Markel Group	163%	167%	224%	212%	202%
Philadelphia Consol.	84%	86%	94%	101%	99%
St. Paul Cos.	224%	257%	262%	246%	225%
W.R. Berkley	132%	130%	132%	133%	137%
AM Best Aggregation - Commercial Lines	163%	169%	183%	187%	190%
Personal Lines					
Allstate	65%	66%	74%	79%	86%
Mercury General	37%	37%	35%	34%	37%
Progressive	43%	44%	38%	39%	44%
SAFECO	103%	94%	93%	94%	102%
AM Best Aggregation - Personal Lines	70%	71%	73%	75%	77%
Reinsurance					
Everest Re	214%	406%	317%	319%	251%
Odyssey Re Holdings	190%	261%	310%	278%	284%
Partner Re	134%	136%	149%	128%	138%
Renaissance Re	1983%	1878%	303%	172%	120%
Transatlantic	164%	163%	188%	199%	214%
Trenwick Group	206%	241%	325%	246%	221%
AM Best Aggregation - Reinsurance	258%	238%	246%	265%	242%
Others of Interest					
Zurich/Farmers Group	78%	81%	87%	85%	81%
Liberty Mutual Group	192%	194%	204%	193%	195%
Lumbermens Mutual Group (Kemper Ins. Cos.)	163%	156%	181%	167%	169%
Fireman's Fund	182%	198%	207%	224%	233%
State Farm Group	65%	63%	60%	59%	58%
American Re	205%	175%	187%	221%	209%

All data taken from the most relevant statutory filing available (e.g., consolidated group filing or lead US company as situation dictates).

For some, statutory data may not capture bulk of business and offshore intercompany reinsurance may distort the trend.

Source: AM Best Co. and Morgan Stanley Research.

Exhibit 9

Ratio Five: Total Reserve/ Paid Losses

	2001	2000	1999	1998	1997
Diversified Companies					
ACE INA Group	309%	167%	283%	334%	364%
AIG	152%	171%	196%	229%	237%
Berkshire Hathaway Insurance Group	317%	260%	263%	289%	299%
Cincinnati Financial	165%	176%	175%	173%	192%
Hartford Financial	187%	243%	251%	281%	303%
Travelers P&C	247%	270%	282%	315%	370%
XL America Group	346%	207%	326%	383%	2120%
AM Best Aggregation - Commercial Lines	191%	202%	219%	242%	258%
Specialty					
C NA Insurance Companies	150%	218%	201%	273%	256%
Chubb Group	250%	285%	248%	311%	348%
Markel Group	296%	311%	300%	333%	384%
Philadelphia Consol.	199%	189%	196%	306%	306%
St. Paul Cos.	263%	258%	310%	298%	306%
W.R. Berkley	188%	172%	194%	219%	243%
AM Best Aggregation - Commercial Lines	191%	202%	219%	242%	258%
Personal Lines					
Allstate	81%	86%	98%	108%	120%
Mercury General	54%	55%	55%	57%	66%
Progressive	62%	60%	55%	59%	69%
SAFECO	128%	120%	122%	124%	135%
AM Best Aggregation - Personal Lines	85%	88%	94%	98%	103%
Reinsurance					
Everest Re	269%	293%	429%	485%	580%
Odyssey Re Holdings	233%	241%	280%	308%	426%
Partner Re	213%	295%	182%	154%	201%
Renaissance Re	166%	234%	99%	171%	106%
Transatlantic	241%	191%	257%	314%	351%
Trenwick Group	221%	200%	309%	294%	357%
AM Best Aggregation - Reinsurance	316%	295%	323%	370%	422%
Others of Interest					
Zurich/Farmers Group	90%	94%	117%	127%	108%
Liberty Mutual Group	200%	201%	219%	227%	229%
Lumbermens Mutual Group (Kemper Ins. Cos.)	185%	171%	202%	227%	252%
Fireman's Fund	220%	170%	235%	261%	306%
State Farm Group	69%	71%	72%	72%	74%
American Re	270%	227%	238%	319%	390%

All data taken from the most relevant statutory filing available (e.g., consolidated group filing or lead US company as situation dictates).

For some, statutory data may not capture bulk of business and offshore intercompany reinsurance may distort the trend.

Source: AM Best Co. and Morgan Stanley Research.

Exhibit 10

Ratio One: IBNR/ Earned Premium

	Months of Development									
Acc Yr.	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**
1992	26.7%	14.3%	9.0%	5.9%	4.1%	3.0%	2.3%	1.7%	1.2%	0.8%
1993	25.3%	14.0%	9.3%	5.7%	3.8%	2.9%	2.0%	1.4%	1.0%	
1994	24.8%	13.4%	8.3%	5.1%	3.7%	2.6%	1.8%	1.2%		
1995	23.5%	12.6%	7.8%	4.9%	3.4%	2.3%	1.5%			
1996	22.4%	11.6%	6.9%	4.0%	2.5%	1.6%				
1997	21.2%	10.5%	6.0%	3.4%	2.1%					
1998	19.9%	9.4%	5.3%	3.2%						
1999	19.7%	8.9%	4.6%							
2000	19.9%	8.8%								
2001	21.8%									

Total US P/C Insurance Industry

Source: AM Best and Morgan Stanley Research

Exhibit 11

Ratio Two: IBNR/ Cumulative Paid Losses

	Months of Development									
Acc Yr.	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**
1992	82.1%	28.7%	15.5%	9.4%	6.2%	4.5%	3.3%	2.4%	1.7%	1.1%
1993	88.1%	31.6%	17.8%	10.1%	6.4%	4.6%	3.2%	2.2%	1.5%	
1994	75.5%	27.2%	14.5%	8.0%	5.7%	3.9%	2.6%	1.8%		
1995	76.0%	26.9%	14.4%	8.2%	5.5%	3.5%	2.4%			
1996	67.4%	23.5%	12.1%	6.4%	3.8%	2.4%				
1997	68.7%	22.9%	11.3%	5.8%	3.3%					
1998	59.3%	18.9%	9.2%	5.0%						
1999	57.4%	17.5%	7.6%							
2000	55.5%	16.4%								
2001	60.2%									

Total US P/C Insurance Industry

Source: AM Best and Morgan Stanley Research

Exhibit 12

Ratio Three: IBNR/ Cumulative Reported Loss

	Months of Development									
Acc Yr.	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**
1992	49.9%	22.2%	13.2%	8.5%	5.8%	4.2%	3.2%	2.3%	1.6%	1.1%
1993	52.0%	24.2%	15.1%	9.0%	5.9%	4.4%	3.1%	2.1%	1.5%	
1994	46.7%	21.2%	12.3%	7.3%	5.3%	3.7%	2.6%	1.7%		
1995	47.0%	21.2%	12.3%	7.4%	5.2%	3.4%	2.3%			
1996	43.4%	18.8%	10.5%	5.8%	3.6%	2.3%				
1997	43.6%	18.1%	9.7%	5.2%	3.1%					
1998	38.4%	15.1%	7.9%	4.5%						
1999	37.8%	14.0%	6.6%							
2000	37.3%	13.3%								
2001	39.3%									

Total US P/C Insurance Industry

Source: AM Best and Morgan Stanley Research

Exhibit 13

Ratio Four: Total Reserve/ Earned Premium

	Months of Development									
Acc Yr.	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**
1992	47.8%	28.9%	19.0%	12.8%	9.0%	6.6%	4.9%	3.8%	2.9%	2.4%
1993	45.2%	27.5%	18.7%	12.5%	8.5%	6.3%	4.7%	3.4%	2.7%	
1994	45.1%	27.2%	18.1%	11.8%	8.3%	5.9%	4.2%	3.2%		
1995	42.6%	25.3%	16.9%	11.2%	7.9%	5.4%	3.9%			
1996	40.8%	23.8%	15.7%	10.1%	6.6%	4.5%				
1997	39.0%	22.6%	14.9%	9.6%	6.4%					
1998	38.0%	22.0%	14.3%	9.8%						
1999	37.6%	21.6%	13.9%							
2000	37.4%	21.2%								
2001	41.2%									

Total US P/C Insurance Industry

Source: AM Best and Morgan Stanley Research

Exhibit 14

Ratio Five: Total Reserve/ Cumulative Paid Loss

Acc Yr.	Months of Development 12	24	36	48	60	72	84	96	108	120
1992	146.7%	57.9%	32.8%	20.4%	13.6%	9.6%	7.1%	5.4%	4.1%	3.3%
1993	157.6%	62.1%	36.0%	22.0%	14.2%	10.1%	7.4%	5.3%	4.2%	
1994	137.3%	55.0%	31.6%	18.7%	12.6%	8.7%	6.0%	4.6%		
1995	137.7%	54.2%	31.0%	18.9%	12.7%	8.4%	6.0%			
1996	122.5%	48.4%	27.8%	16.5%	10.3%	6.8%				
1997	126.5%	49.3%	27.9%	16.3%	10.4%					
1998	113.6%	44.3%	24.8%	15.5%						
1999	109.5%	42.2%	23.1%							
2000	104.3%	39.6%								
2001	113.6%									

Total US P/C Insurance Industry

Source: AM Best and Morgan Stanley Research

Global Stock Ratings Distribution

(as of Dec 31, 2002)

	Coverage Universe		Investment Banking Clients (IBC)		
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight	597	31%	237	38%	40%
Equal-weight	925	48%	292	46%	32%
Underweight	403	21%	101	16%	25%
Total	1,925		630		

Data include common stock and ADRs currently assigned ratings. For disclosure purposes (in accordance with NASD and NYSE requirements), we note that Overweight, our most positive stock rating, most closely corresponds to a buy recommendation; Equal-weight and Underweight most closely correspond to neutral and sell recommendations, respectively. However, Overweight, Equal-weight, and Underweight are not the equivalent of buy, neutral, and sell but represent recommended relative weightings (see definitions below). An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley or an affiliate received investment banking compensation in the last 12 months.

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Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

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Attractive (A). The analyst expects the performance of his or her industry coverage universe to be attractive vs. the relevant broad market benchmark over the next 12-18 months.

In-Line (I). The analyst expects the performance of his or her industry coverage universe to be in line with the relevant broad market benchmark over the next 12-18 months.

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