
❖ Contrarian Research Report ❖

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❖ Contrarian Views and Ideas ❖

Studies in Absurdity

Subject: The Logical Consequences of Yahoo!

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I – Introduction

The human fears error to the extent that this fear is only surpassed by the fear of being perceived to be in error by others. This observation is quite relevant with regard to a security such as the Yahoo equity. The believers in the future of the shares must contend with the past collapse of the share price in the aftermath of the Internet bubble subsequent to March 10, 2000. Perhaps the shares will once again collapse in value due to excessive valuation. The risk is that one will be perceived to be in error.

On the other hand, the unbeliever does not dare sell these shares short. The months preceding the Internet bubble peak on March 10, 2000 might be repeated. The valuation of the Yahoo shares might easily exceed anything recently recorded. Consequently, a short seller will risk being perceived to be in error.

The most numerous group is, of course, the agnostics. However, unlike the agnostic in matters of faith, an agnostic in the world of equity investing is not permitted the luxury of indifference or doubt. In fact, the agnostic in the world of investing is not even permitted the luxury of privacy of conscience. This is because investment holdings and investment performance are exposed to observation and critique. The agnostic in Yahoo is revealed as such by the failure to own the shares. In the case of this share, failure to own may well be the difference between outperformance and underperformance of the benchmark S&P 500 index. Naturally, Yahoo is included in the index and now ranks 48th within the index in terms of market capitalization. An agnostic will therefore own Yahoo shares within a managed portfolio in proportion to its weight within the index. As is not the case in matters of religion, the investment agnostic attends services regularly and prays fervently.

II – The Self-Perpetuating Cycle

If one agrees that there are investment agnostics and since there are quite obviously equity indices, then if a given firm can issue a sufficient number of shares to create a large market capitalization, that firm is very likely to be included in one or more equity indices. If the shares are part of various indices, then there will certainly be a ready market for those shares among the vast number of agnostics who must purchase these shares to avoid the possibility of being thought to be in error by failure to outperform an index in a given time.

If there is a ready market for the shares, the issuing firm now effectively has possession of a form of currency. The firm might then decide to issue more shares to its employees in the form of stock options as a means of compensation. Current accounting rules provide that the cost of the options need not be reflected as an expense of the corporate income statement. Since some portion (usually large) of employee compensation expense is not recorded as an expense, earnings are higher than would otherwise be the case and this is

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adequate grounds for a share price increase which, in turn, makes the issuance of further shares all the more irresistible. As more shares are issued and as the value of these shares increases, the agnostics must further increase purchases in order to maintain the proper portfolio weight. This is a cycle that seems to be rather self-reinforcing.

III – The Position of the Believer

The agnostic has now made the position of the believer very uncomfortable. In religion, the reward of belief is everlasting afterlife. In the world of investments, the only reward is more money to manage. Yet, in order to achieve this, the believer must be distinguished from the agnostic through the process of “adding value”. This is usually done by increasing the proportionate weight of Yahoo shares held in a portfolio to a level well in excess of the index weight. It therefore logically follows of the position and actions of the believer merely reinforces the already self-reinforcing cycle set in motion by the agnostic. In the case of Yahoo, this is an increase in share price.

IV – The Aftermath of the Bubble

Let us place ourselves in a rather uncomfortable position of the agnostic on the evening of March 9, 2000. The agnostic might well have owned shares of firms such as Yahoo, eBay and Amazon.com. At that moment, the valuations of these firms must have seemed to be excessive. The temptation to sell must have been very strong. Of course, sale of these securities can expose the agnostic to the danger of being thought in error. Clients might withdraw allegiance to the agnostic equity manager. The more clever agnostics might have thought it wise to sell Yahoo, EBay and Amazon.com and to reinvest proceeds in “safer” or more mature firms such as Cisco Systems, Intel or Microsoft. The results of such an action are evident in the following table.

Performance of Technology Bubble Stocks from March 10, 2000 to June 18, 2004

	<u>Group I</u>	<u>Compound Annual Return</u>
Yahoo		(21.23)%
EBay		14.59%
Amazon.com		(6.74)%
	<u>Group II</u>	
Cisco Systems		(22.11)%
Microsoft		(12.62)%
Intel		(16.33)%

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It is obvious that the Group 2 or “safer” firms have underperformed the bubble stocks since the collapse after March 10, 2000. This tendency has continued in the one week from June 18, 2004 to June 25, 2004.

<u>Group I</u>	<u>June 18, 2004</u>	<u>June 25, 2004</u>
Yahoo	\$32.07	\$34.91
EBay	\$86.50	\$90.72
Amazon.com	\$49.60	\$51.80

<u>Group II</u>		
Cisco Systems	\$23.42	\$23.43
Microsoft	\$28.35	\$28.57
Intel	\$27.64	\$27.78

The appreciation of the Group 1 shares from October 2002 has been so enormous as to efface the declines of the bubble aftermath period. Yahoo and eBay are now included in the S&P 500 index and rank of 48th and 37th positions in market capitalization, respectively. The agnostics have evidently purchased shares, and their aggregate purchasing power is quite considerable.

V – The Economics of a Bubble Share Short Sale

Let us assume that Yahoo were to decline by 90% to a share price of \$3.49. This would not be without historical precedent since Yahoo traded at less than \$5 per share at the end of September 2002. It would also not represent a valuation extreme. Yahoo, according to its own figures, is operating at breakeven levels if due allowance is made for the issuance of stock options. At a share price of \$3.49, Yahoo would trade at roughly 1.2x forecasted revenue while operating at breakeven.

However, the actions of believer and agnostic have set in motion a self-reinforcing trend towards higher share prices. The 2% year-to-date return of the S&P 500 has witnessed a 27 basis point contribution from Yahoo as well as an approximate 27 basis point contribution from eBay. These two equities account for 25% of the year-to-date S&P 500 return. Such shares are therefore indispensable. A short seller might witness a share price increase to a considerably higher level.

Thus, let us assume that our imaginary short seller waits for a Yahoo share price of \$69.82 or double the current level. Let us further assume that the share collapses afterward to the \$3.49 level. The return to the short seller is 95% or only 500 basis points higher than

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would be the case if shares were sold short at a much lower price. Similarly, if the shares were to attain the level of \$139.64 or four times the current level and were then sold short, only to decline to \$3.49, the potential return to short seller only increases from 95% to 97.5%.

VI – Position within the S&P 500

Yahoo currently has the 48th largest market capitalization within the S&P 500. Since Yahoo trades at 109.1x the anticipated pro-forma earnings for 2004, investors or, more properly expressed, believers expect much growth from Yahoo. The consensus opinion on this subject is that Yahoo should be able to grow its earnings at over 50% per annum for the next several years. The probability that any of the 47 firms in the S&P 500 with a higher market capitalization than Yahoo will grow profits at 50% per annum is essentially zero. Therefore, the belief that Yahoo will grow at 50% per annum is logically equivalent to the belief that it will increase its position in the S&P 500. At a 50% growth rate and no diminution of current valuation metric, Yahoo will have a \$384 billion market capitalization within five years. Of course, this calculation makes no allowances for the almost certain issuance of shares, which would result in an even higher market capitalization. General Electric, the largest company within S&P 500, currently has a market capitalization of \$328 billion. GE plans to spin off its insurance businesses, which might have a market capitalization of perhaps \$50 billion. Thus, post spin-off, the GE market value will be \$278 billion. Given a 12.5% growth rate, GE might attain a \$500 billion a capitalization in five years. If Yahoo merely increases its share count by 5% per annum and grows at the expected rate without diminution of valuation metric, it should also attain a \$500 billion market capitalization. Therefore, the believers effectively but not actually argue that Yahoo will be the largest company in S&P in 60 months.

VII – The View of the Employee

The Yahoo employees are in a curious position. These receive copious amounts of Yahoo stock options as part of compensation. However, it is important to remember that these options have contingent value and not actual value. In order to have value from the perspective of an employee, the share must increase in price. Indeed, as noted previously, the Yahoo shares have substantially increased in price since October 2000. The increase is approximately sevenfold. The employee recipients of future options cannot reasonably expect a sevenfold increase in the shares in the next 20 months. Consequently, if the share does not increase in value at the recent rate, it logically follows at the compensation of the employees is being effectively reduced, albeit not by the actions of the company. It might be argued that the employees understand that options are a form of variable compensation and, as such, compensation will therefore vary.

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However, there is another aspect of this question. The economic value of Yahoo at \$34.91 per share is surely less than the economic value of Yahoo at a price below \$5 per share. The economic value of Yahoo shares at \$69.82 are even lower. Thus, viewed from the perspective of the company, X option grants at a \$69.82 strike price involve far less potential dilution than X option grants at \$34.91 at a \$34.91 strike price. The situation is not very different than paying in depreciating currency except that in the world of equity, as opposed to currencies, an appreciating equity is the mathematical equivalent to a currency where value is being eroded by inflation. The employees who accept this currency as a form of payment are practically engaged in a form of money illusion. If the employees ever become unwilling to accept this currency as a form of payment, the self-reinforcing cycle of share issuance and share appreciation will end.

VIII – The Perspective of the Short Seller

The economics of a bubble stock short sale have already been discussed in section V. The short seller does not improve returns by appreciable amounts if the short sales are undertaken at higher prices. However, if the short sales are not undertaken at extremely high prices, the damage to portfolio return can be very substantial.

A short seller might at any moment have deployed 40% or 50% of total portfolio exposure toward short sales. Surely at 50% short exposure, one must reckon with at least a 10% adverse move in the short book. Arithmetically, this will cost the portfolio 500 basis points or 5%. It seems therefore reasonable to state that a short seller is willing to sacrifice at least 500 basis points per annum in order merely to maintain a short position of 50% magnitude. Realistically, most of the short sale equities will not decline to a price of zero. Also, realistically, these positions will not be covered at the low point. Thus, the expected return even in success mode is well below 100%. Further, this will occur in many instances over the fullness of time so that whatever return is achieved will be diminished on a compound annual basis if achieved in more than one year.

Let us assume that one is willing to sacrifice potentially 500 basis points of return per annum in order to maintain a short exposure of 50%. If the average short were to decline by 80%, the expected contribution to portfolio return would be 40%, or 4,000 basis points. In that case, the following alternative might be of some interest.

If one were to establish a 1.5% position in Yahoo October 2004 30 put options, the most recent price is \$0.95 per contract. If Yahoo were to decline to \$3.49, then the intrinsic value of the option would be \$26.51, for a return of 2.691%. This would add 40 percentage points or 4,000 basis points to portfolio return. Of course, if Yahoo continues its upward trajectory, as seems likely, or even fails to decline below 30 by October 15, 2004, the option would be worthless.

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If Yahoo reaches extremely high prices, the strategy becomes rather intriguing. If Yahoo were to rise to roughly \$93 per share, the trading price of a Yahoo put option roughly 15% out of the money can be accurately simulated by an eBay put, since eBay currently trades at a roughly \$93 as these words are being written. The eBay October 75 put options are \$1.15 bid, \$1.25 asked. The option is 19.3% out of the money. This is probably where a Yahoo option of similar characteristics would trade. Let us assume that Yahoo is \$93 per share, and that one purchases a 1.5% position in a Yahoo October 75 put option (note that this security has yet to exist, since Yahoo is not yet \$93 per share). Let us further assume that Yahoo declines to \$3.49 per share in one of the periodic bubble deflations that are caused by human dysfunctional behavior. In that case the intrinsic value of the put option would be \$71.51 per contract. The return is 5,620.8%. The contribution to portfolio return would be 84.30 percentage points or 8,430 basis points. If this happens, one has effectively hedged a 92% long exposure, even during a crash, with a 1.5% short or put position.

The math becomes more interesting still if Yahoo ascends to \$140, \$150, \$160, or even \$170 per share. A disciplined investor who buys a Yahoo 15% out of the money put option with only four months to expiration has only to await a bubble burst once in order to achieve a very substantial portfolio impact. It must be noted that one is sacrificing 150 basis points of portfolio return every four months as Yahoo increased in value. However, this is less than would be sacrificed by a 50% short position in an environment of a 4% market increase. It ought to further be observed that the risk of the short positions is at least theoretically infinite. The maximum loss of the position is finite and knowable.

Another alternative is a shorter term put option with far less time value. The Yahoo August 2004 30 put options are \$0.40 bid, \$0.50 asked. In the case of a Yahoo decline to a price of \$3.49, the intrinsic value of the option is \$26.51. The return is 5,202%. Since August is only 2 months away from the current date, as opposed to four months in the prior example, one would establish a 0.75% position in the option as opposed to the prior 1.5% so as to limit the annual loss to 4.5%. There are six periods of two months duration within a year, so that $6 \times 0.75\%$ equals 4.5%. A return of 5,202% earned by a 0.75% position would contribute 39.02 percentage points to the portfolio return. In order to summarize the perspective of the short seller, one can state that a bubble share affords enormous hedging as well as profit potential if used as a small option position rather than as a short position. Moreover, unlike a short position, the return contribution to the portfolio from a position of constant size increases as Yahoo increases in price.

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Summary and Recommendation

The human mind unjustifiably fears error. Sometimes insight actually emerges from error. For example, there is a very obvious error in the Jules Verne novel 20,000 Leagues Under The Sea. A League is equal to $1/20^{\text{th}}$ degree of arc. Since the Earth is roughly but not quite spherical, it has 360° or 7,200 20^{th} degrees of arc. If the circumference of the Earth is 24,901.56 miles, $1/20^{\text{th}}$ degree of arc equals 24,901.56 divided by 7,200, or roughly 3.45 statute miles. In order to be 20,000 leagues under the sea, one would need to be 20,000 x 3.45 miles under the sea or 69,000 miles, which is 2.77x the circumference of the Earth. Therefore, it is quite impossible to actually a 20,000 Leagues Under the Sea. Nonetheless, none of this seems to detract from the delight of this novel. In addition, the novel does accurately predict the modern development of the submarine, among other insights.

Similarly, it is almost certain that any forecast of the of the Yahoo share price will be in error. This is because there is no model that will successfully and accurately reckon with the human behavioral dimension of the “investment” decision process. Nevertheless, viewed from a mathematical perspective, the only thing that actually matters is that the bubble will one day burst. If much time and many option trade iterations are required, the mathematical consequence is that portfolio return contribution from this trade will increase, with much benefit to the hedge aspect of a portfolio. Therefore, a position in Yahoo put options of a near term character approximately 15% out of the money should prove to be a rewarding investment.