



The Epicenter

“Convergence” Is the Key Concept

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One industry's five main business models.

At Merrill Lynch, we view the growth of the internet and e-commerce as a global mega-trend, along the lines of the printing press, the telephone, the computer, and electricity. We believe it will affect dozens of industry sectors in the world economy over the next decade. This e-commerce report was designed to help investors think through the impact of the internet and e-commerce on a variety of different industries and provide some recommended strategies for investing around it. One of these strategies, of course, is to invest directly in the trend—in the seemingly absurdly priced stocks of the companies that are most directly exploiting it. Given the valuations and volatility involved in “direct” internet/e-commerce stocks, investing in the sector clearly isn’t for everyone. In the rest of this section, however, we will describe how we view the different types of companies sector and lay out an investment philosophy that helps us come to terms with the extraordinary valuations.

■ Overview of Our Internet / e-Commerce Coverage

We cover the internet and electronic commerce industries from a broad perspective, including companies from a diverse group of industry subsectors in our full-coverage universe. The overarching theme of the industry is, of course, “convergence”—of publishing, television, radio, telecom, cable, computers, and software. All of the companies we cover facilitate online communication and commerce.

As the industry develops, it may prove more sensible to focus exclusively on one or two subsectors—“online content,” for example, or “online retailing.” In the current world, however, we find that there is so much cross-pollination of the various business models and so many inter-sector relationships and transactions that we believe we can gain a greater understanding of industry dynamics (and, therefore, add more value) by viewing it as a whole. America Online, for example, is not only the largest dial-up access provider but the largest content provider and a major internet retailer as well. Amazon.com not only sells books but also rents virtual real-estate from Yahoo!, buys access from UUNet, buys electronic-commerce software from Sterling Commerce, and aggregates proprietary content from dozens of publishers.

We segment the industry into five main species of business model. An interesting and unusual aspect of the industry is that a number of the leading companies (AOL, for example) take advantage of more than one business model. The five business models are:

1. **Access.** Companies that sell dial-up and/or dedicated network connections or other network management services. The typical business model is based on monthly fees, which are determined by the speed of the connection and/or the volume of data flowing through it.
2. **Content.** Companies that provide the stuff you see when you go online. These include both “portals,” which organize and provide access to content created by other companies, and “destinations,” which create specialized content (news, sports, etc.). The typical business model is based on advertising and, in some cases, subscription fees.

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3. **Commerce.** Companies that sell merchandise, or facilitate the matching of buyers and sellers. The typical business model resembles that of a catalog retailer or auctioneer, although as the industry develops it will likely begin to encompass advertising as well. Commerce companies operate in three arenas: consumer-to-consumer (C2C), business-to-consumer (B2C), and business-to-business (B2B).
4. **Software.** Companies that sell software that facilitates inter- or intra-enterprise communication and commerce. The typical business model is composed of software license fees, software maintenance fees, consulting services and, increasingly, software hosting and operation services.
5. **Services.** Companies that provide a wide variety of services necessary in the online ecosystem, including hosting, application rental, transaction processing, information databasing, consulting, design and implementation. The typical business model is based on either “per-click” transaction fees, time-and-materials fees, or subscription fees.

■ Overview of Our Internet/e-Commerce Investment Philosophy

We view the growth of the internet and e-commerce as a global mega-trend, along the lines of the printing press, the telephone, the computer, and electricity. We believe it will affect dozens of industry sectors in the world economy over the next decade. Unlike a mere technology trend, which renders prevailing technologies obsolete and, in so doing, creates an opportunity for vendors of new technologies to quickly build large businesses, the internet is changing the way people and companies communicate, research, buy, sell, and distribute goods and services, and spend leisure time. As a result, the internet is not only creating the opportunity for new businesses to get big fast, but introducing change and competition into a wide range of mature industries, including media, retailing, technology, telecommunications, financial services, transportation, healthcare, and energy. Despite the enormous hype that has surrounded the sector over the last few years, we believe we are still in the early stages of this trend.

The early stages of a far-reaching trend.

We believe that the internet will continue to cause the creation and/or redistribution of hundreds of billions of stock market capitalization over the next decade. Investment capital—and, with it, market value—migrates toward growth and away from stagnation and risk. The internet is creating both amazing growth and significant risk—a phenomenon that in our opinion is evident in the microcosm of one small sub-sector of the economy: bookselling. Amazon.com, one of the fastest-growing companies in history, has grown from nothing to a \$1 billion run-rate only four years after opening its virtual doors; Borders, meanwhile, just missed its Q4 numbers (did the snowstorms discourage people from going to stores—or make them see the convenience of shopping from home?). We believe that the dynamics of the internet’s impact on the bookselling market may well be played out in other sectors and sub-sectors of the economy: a nimble internet start-up gets shot out a cannon and grabs the first-mover advantage; some existing sector leaders react late but effectively; other players miss the boat. The end-result of the internet on the stock market, in our opinion, will be a significant re-distribution of market value (compare charts of AMZN, BKS, and BGP). Based on the speed with which the medium is developing, moreover, we believe this redistribution may happen sooner than people think.

Growth attracts capital.

We recommend that investors think about, industry by industry, the internet’s likely effect on the economy and develop a comprehensive strategy for investing around it, whether direct or indirect, offensive or defensive. The broad-based internet stock phenomenon clearly looks like a bubble, and although we still like the leading stocks, we can certainly understand the hesitancy on the part of investors to jump directly into the fray. The good news is that there are many different ways to play this trend—and not all of them include chasing YHOO out

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of the solar system. As with most trends, some industries and companies are positioned to benefit from the revolution, others are positioned to get hammered by it.

We recommend that diversified growth investors allocate a small percentage of total capital to a basket of high-quality, direct internet investments (of which, in our opinion, there are about 10 to 15). Underneath the internet sector's dizzying valuations, in our opinion, are the foundations of what could become the early 21st Century's leading growth companies—a group that we think could include one or more of today's "big three": AOL, Yahoo!, and Amazon.com. Much of the capital in our model internet portfolio is concentrated in these three stocks, which we consider the best proxies for the growth of three major internet revenue streams—access, advertising, and commerce. The three companies have shown an ability to manage extraordinary growth and, importantly, evolve along with the industry, and they have management teams that appear to be motivated by much more than money (namely, the chance to make history). Because the companies have solid fundamentals, we believe that in the event of a sector correction, their stocks will be among the least risky investments in the industry.

Remember the adage about the eggs and the basket.

The "basket" approach allows investors to make a few disastrous individual investments and still generate a compelling long-term rate of return. If you take all of the pure-play internet companies in the public market and add them together, you get about \$150 billion in market capitalization—or about a third of a Microsoft. We believe that over the next 5 to 10 years, the internet opportunity will result in the creation of at least one Microsoft-sized company and maybe more (more on this in future notes). The good news is that you don't have to pick out the Microsoft at this stage of the game to make good money—you just have to make sure it's somewhere in your portfolio. If, for example, you were to buy \$100-worth of AOL, Yahoo!, and Amazon.com today and two of them were to go to zero (we don't think they will) while one became Microsoft, you would still get a good rate of return (if the collective value of AOL, YHOO, and AMZN increased from \$150 billion to \$500 billion in 7 years, the annual rate of return would be 19%; in 2006 your \$300 investment would be worth \$1,013 regardless of who won).

The overall internet stock phenomenon may well be a "bubble," but in at least one respect it is very different from other bubbles: there are great fundamental reasons to own these stocks. Say what you will about their valuations, the leading internet stocks are not "concepts"—and they are riding on meteoric fundamentals. The companies underneath the stocks are 1) growing amazingly quickly, and 2) threatening the status quo in multiple sectors of the economy, a one-two punch that many other famous "bubble" investments lacked. The rise and fall of the South Sea Company's stock in 1720, for example (from 125 to 850 to 33 in six months), as well as the rabid urge on the part of South Sea investors to finance thousands of other dubious business plans (sound familiar?), was based on a fraudulent premise: an inexhaustible supply of future riches to be transported to England from South American gold and silver mines. Never mind that throughout the bubble, the alleged riches were owned not by the South Sea Company, but by the King of Spain, who had no intention of allowing anyone to ship them anywhere but Spain. The tulip bulbs bought and sold during the "tulipomania" in the Netherlands in the 1600s had no more inherent value or impact on the world economy than Furbies, Cabbage Patch Kids, and Beanie-Babies do today. The biotech stocks of the early 1990s promised a revolution in medicine and agriculture, but were true "concepts" that, even if successful, were unlikely to affect many other industries. In our opinion, there are good reasons for investors to pay through the nose for the leading internet stocks.

"Bubble" or not, the internet and e-commerce are threatening the status quo, and they are backed by fundamentals.

The internet stocks have always seemed absurdly expensive (and the valuations are indeed eye-popping), but for several reasons we believe they are more valuable than most people think. Stocks go up or down not because they are trading at particular multiples of published projections but because, for a variety of reasons, investors decide to buy or sell them. As implied above, we believe that the leading internet stocks are "valuable" as portfolio investments for reasons that

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have little to do with precise projection and valuation of future cash flows (including actively putting your money where the growth is or defensively moving it out of harm's way). For several reasons, moreover, we believe that even when viewed through the lens of a more rigorous valuation framework, the stocks are worth more than a casual observer might think. These reasons include: 1) that no one knows with any degree of certainty what the future cash flows will be or what the real risk associated with them is (the leading companies have been blowing away expectations from the get-go); 2) the potential for unprecedented returns on invested capital, which will ultimately equate to higher P/E multiples), and 3) benefits from the "network effect," through which franchises are made more valuable and sustainable with every new customer or supplier they add.

It's possible to be too conservative.

With these types of investments, we would argue that it is a mistake to be too conservative in projecting future performance. Yahoo!'s valuation is ridiculous, right? Well, if you believe the projections that suggest that Yahoo! will earn \$0.47 next year, it looks pretty ridiculous, yes. Yahoo! has dusted estimates for the last ten quarters, however, so it seems likely that the \$0.47 might be conservative. How conservative? We don't know. But consider the following: When Yahoo! went public, it looked like the biggest joke in history—a list of web sites with \$1 million in revenue and a \$1 billion valuation. Investors the world over (understandably) crowed about manias and insanity, but Yahoo! was actually trading at an absurdly cheap 10X Q4 1998 annualized earnings. Investors who failed to ask themselves two questions—1) how big the company could actually be, and 2) how fast it could get there—missed the boat.

Focus on the reward side of the risk/reward ratio.

With these types of investments, we would also argue that the real "risk" is not losing some money—it is missing much-bigger upside. Investing in hyper-growth stocks is not about preserving capital (that's what bonds are for); it is about making sure that you are on board the train if and when it leaves. If you are long any equity and if you are one-hundred percent wrong and the stock goes to zero, you can lose 100%. When the long-term upside is only 20%-30%, 100% is a disastrous loss—and the risk/reward ratio is poor. When the upside is 300% or more, however, the possibility that any individual investment in a balanced portfolio will to zero isn't as bad. We do not entirely agree with Alan Greenspan that buying high-quality internet stocks is like buying a lottery ticket—we don't believe the odds are that bad—but we do agree that many skeptical observers of the sector have the wrong mindset. We would argue that in this sector, the real "risk" is not that you lose money if the sector corrects, it's that you miss a potential 3X-10X upside.

Whether or not the stocks are "overvalued," we do not believe that valuation alone will bring them down. The most obvious characteristic about internet stocks is that they seem frighteningly expensive by classical measures—but this hasn't stopped the best ones from appreciating 10X-20X from what were already stratospheric levels. General market pullbacks and sector boom-and-bust spikes aside ("volatile" ain't the word), we do not believe the market is going to wake up one morning and decide to jettison the internet stocks "because they are overvalued." We believe that the broad-based internet mania will end when the fundamentals at the leading companies stop improving, and it is because we don't believe this will happen in 1999 that we are recommending the stocks.

When they look "cheap", don't own them.

We believe that what will be left when the gold-rush finally subsides are a few fast-growing companies with huge market capitalizations—and a lot of tulip bulbs. This is one reason why we recommend investing the majority of an internet portfolio in the sector leaders; all internet trees will definitely not grow to the sky. When the leading companies finally start missing numbers (or, more likely, when estimates stop going up), we think the sector's multiples will contract significantly. The risk of waiting until this happens before investing, however, is that there may be major upside between now and then, and the "corrected" valuations might be compellingly higher than today's. In our opinion, when the internet stocks finally look cheap, they won't be worth owning anymore.

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Remember the laws of supply and demand.

It is important to keep in mind that a major driver of the internet stocks is an imbalance of supply and demand. The price of any good or service is determined not by its inherent “worth” but by the law of supply and demand—and good internet investments are in short supply and great demand. As described, we believe that there are compelling reasons for investors to invest in the internet (demand), and, unfortunately, a relative paucity of great opportunities through which to do so (supply). If you want to live in Manhattan—an experience that many reasonable people would consider less than worthless—you have to pay mind-boggling Manhattan prices. If you want to invest in the stocks of companies that appear to be on their way to becoming the leading growth companies of the early 21st Century, you unfortunately have to pay mind-boggling internet prices (at least for now).

Rely on a shotgun.

The details are important, but we would not talk ourselves out of buying a leader because of a small amount of hair on the story. The best stock-picking tool in this sector right now is a shotgun, not a rifle (it’s all about the “story.”) The best companies, moreover, have been able to evolve along with the industry, avoiding destruction and pursuing new opportunities (which makes it frustrating to say “well, until they fix that problem, they won’t have me as a shareholder”—because by the time they fix it, the people they do have as shareholders may be 2X as rich). As one investor we respect says, “when the microscopes come out, the returns become microscopic.”

We would not waste a lot of time looking for “cheap” names – no internet stocks are cheap, and you get what you pay for. We do not believe that the internet bubble as a whole is tulipmania, but there are plenty of tulip bulbs masquerading as companies out there. If the sector corrects, we believe the stocks of the weakest companies will drop 70% or more, and we don’t think they will necessarily come back. When the biotech stocks finally blew up, the stock of one of the strongest companies in the industry, Amgen, dropped 50% in a month—but it is now trading at more than 3X its high prior to the correction. A lot of the lesser names just disappeared.

You get what you pay for.

We would not short these stocks simply because they are expensive—too often in the industry’s short history, this has been fatal. Just because a stock should regress to a historical mean doesn’t mean it will—especially when every investor in the world is trying to accumulate it. Although the internet stocks are desperately tempting to short on valuation, we would carefully analyze the risk/reward ratio before doing so. The most you can make when you short a stock is 100%. As has been made clear over the last two years, the most you can lose when you short *these* stocks is, well, 1,000%-plus percent—which is not exactly a compelling risk/reward proposition.

Keep your head if others lose theirs.

Based on the sector’s propensity for boom-and-bust price spikes, we would actively manage risk exposure. At least three times over the last year, the internet stocks have spiked wildly in a frenzy of panic-buying and short-covering and seemed as though they would never come back down. Each time, though, when the euphoria wore off, they pulled back 30% to 50% from their spike highs. In the event that we get another one of these spikes, we wouldn’t panic—we would trim positions into the run and buy in again once the bloom falls off the rose. The stocks are very sensitive to catalysts (such as the gushing press about the growth of e-commerce over the holiday season), so before adding to positions, we would also think about what might be coming next.

Key characteristics.

What we look for in internet investments. In trying to pick the sector’s best long-term performers, we tend to look for the following: 1) businesses that are possible only because of the internet and could not exist without it—such as AOL, Yahoo!, eBay, Doubleclick, and to a lesser extent, Amazon.com; we do not believe that major internet market value will be created by porting existing media and retailing concepts online; 2) enormous market opportunities—if the concept works, we want the company to be able to get huge; 3) platforms or foundations that can

evolve to take advantage of new opportunities as they develop (Yahoo! started as a directory; Amazon.com as a bookstore), and 4) strong, deep management teams that are motivated by more than increasing their net worth—if Bill Gates just wanted the money, he probably would have stopped about \$75 billion ago.

Key concerns.

What we worry about. The sector’s valuations worry us. As described, however, we do not believe that valuation alone will knock the stocks down. We believe that the valuations will begin to conform more with historical norms when 1) the fundamentals slow down, or 2) the supply of quality investment opportunities finally exceeds demand (never before have so many investors been seeking so few shares). As far as the fundamentals are concerned, we are keeping close tabs on four major growth drivers: 1) new online users, 2) advertising dollars, 3) commerce dollars, and 4) technology and services dollars. Of these, we are currently most focused on the number of new users, which is the first of the major metrics that we believe will slow down. With regard to the supply/demand imbalance, we also acknowledge the possibility that this spring’s massive IPO pipeline, combined with recent billion-dollar financings from Amazon.com, Inktomi, Network Solutions, and others, will begin to sate investor demand for internet shares. Our hope and belief, however, is that the ever-growing demand will continue to outpace supply—especially considering that only a minority of filed IPOs can be labeled “high-quality.”

Three major considerations.

To review...we find it helpful to consider the following when assessing the internet sector’s valuation and volatility risk: 1) whether allocating a small percentage of the portfolio to direct investments in one of the largest economic trends in history is worth the valuation risk (we think it is); 2) more specifically, whether the risk of losing 50%-75% in a correction is offset by the risk of missing further 3X-10X returns (we think it is), and 3) whether the internet’s potential to hurt other, “safer” investments increases the value of owning a small basket of these stocks (we think it does).

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