50 Stocks for the App Revolution

In "50 Stocks for the App Revolution", we attempt to identify 50 of the companies most widely exposed to the app and smartphone revolutions. We break the universe of app stocks into eight categories, though obviously some gray areas exist – is Nokia a platform builder or a handset vendor? Both, is the answer, but for the sake of organization, each stock is bracketed into one category.

We then give a brief description of each company's primary businesses and outline some of the most important balance sheet and business fundamentals. Rather than just going with a simple P/E, we break down the enterprise value of each company, which makes companies that have huge cash balances and lots of flexibility look cheaper than those carrying big net debt loads around their necks. Some analysts would rather not look at earnings per share in such cases because the interest on those huge cash balances don't necessarily reflect the underlying cash flows from the business. But as an investor, we care first and foremost about earnings, even those that come from interest from smartly managed balance sheets.

From there I give you some of my trademarked cut-throat Revolution Investing analysis including some history of the company, how it's trying to position itself for the app revolution and how much I like or dislike the investment prospects for that company.

And for those of you who really just want a short hand rating system, don't worry. I put a Revolution Investing rating from 1 to 10 on each stock. A 1 rated stock means I'm worried about the company's ability to successfully navigate the app revolution despite having big exposure to it, and in that way, I help keep you away from the bad apples. Meanwhile, a 10-rated stock would be a perfect investment (and since such a thing doesn't exist, the highest rated stock you'll find the report is a 9 out of 10). – Cody Willard, founder of AppConsumer.com and editor of Revolution Investing newsletter, November 23, 2010

50 Stocks for the App Revolution

"So I need to know more about investing in apps, Cody."

I've heard those words from so many people — rock n roll legends, from reporters at glossy magazines, retired billionaire software entrepreneuers, readers of this blog, waiters at a sushi restaurant in Englewood, NJ, workers at the Tonight Show and other Hollywooders, along just about every body in between who's heard anything I have to say about this burgeoning app revolution.

I've spent a ton of time and energy since I quit my job as a TV anchor on the best ways to invest in apps. And there's a very simple explanation for that — I believe that apps truly are just getting started on their way to becoming the single largest marketplace that this planet has ever seen, and I want to be a part of that. I'm in a fortunate position of being able to decide what I want to spend my time on these days — I've explored getting involved with real estate investment funds, I've explored doing more TV stuff, I've explored a bunch of stuff…but I keep coming back to apps because nothing excites me like the opportunity I foresee over the next one to five years for those of us who bet on the app revolution and its potential to change everything we do with content, work and each other over that same time frame.

It's actually that very sincere belief that getting involved with apps now is going to pay off huge later that's probably what's stirring all these people to ask me about how best to invest in apps. Well, that and the fact that they're probably recognizing this burgeoning marketplace on their own too. Burgeoning, indeed:

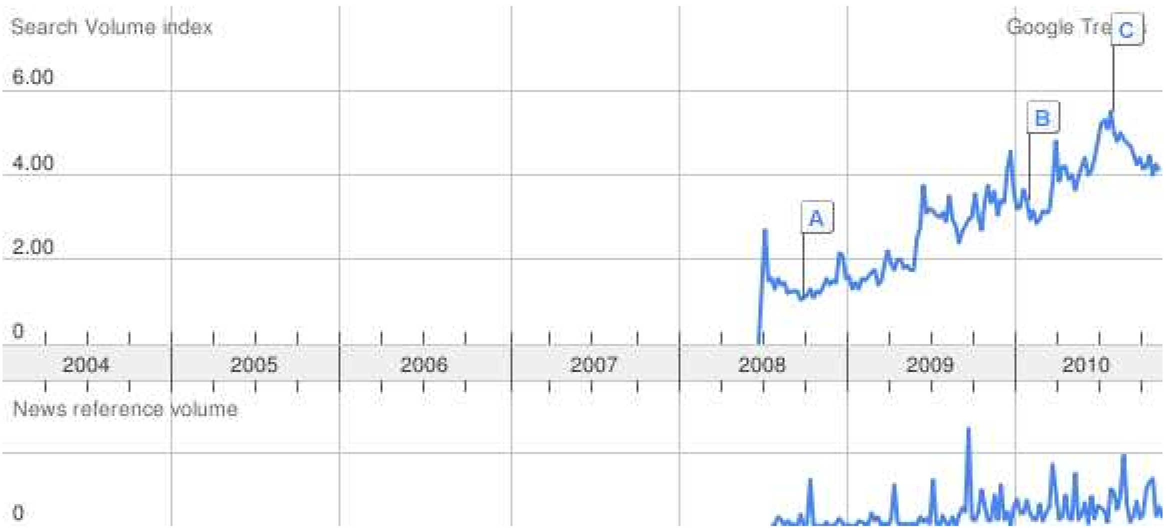
* 100 million smartphones sold last year.
* Much more than 250 million smartphones will be sold next year.
* More than a billion smartphones will be sold annually within ten years.
* That'll mean an installed customer base of two billion people using smatphones and the apps that run on them by the year 2020.
* Those two billion customers will be using dozens if not hundreds of apps each every year.
* That means we're talking about several hundred billion different apps being consumed every year within a decade from now.

Doesn't it just about make your mind go numb trying to fathom that kind of growth and potential marketplace?

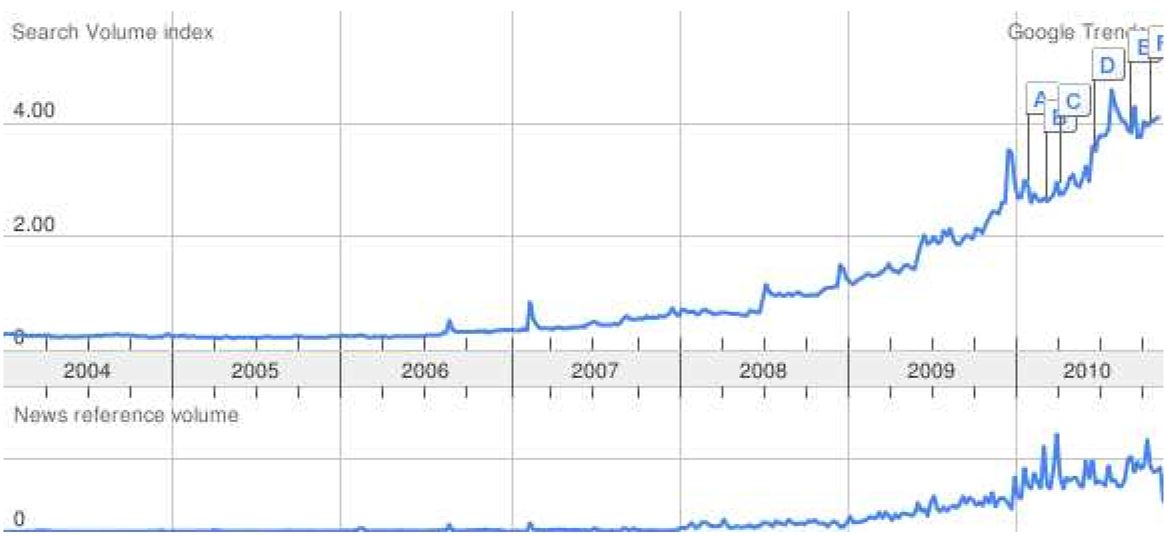
More than 100 million people will buy their first app-enabled smart phone this year. More than a quarter billion people bought an app-enabled smart phone in 2010. There will be more app-enabled smart phones sold than PCs in 2011. There will be more than one billion app-enabled smart phone users on the planet within the next three years. And by the year 2020, more than one billion people will buy an app-enabled smart phone every year and more than one-third of the world's population –more than two billion people — will be using apps on their smart phones. (All these estimates come from Gartner, RBC Capital Markets and Willard Media Ventures).

That's a market I want to play in.

App wasn't a household term just three years ago, but with the advent of the iPhone and then the Android, not to mention the latest rounds of Blackberry, Palm, Nokia and Windows phones, everybody knows about apps now. Take a look at the growth in searches for "App Reviews" from Google Trends:



Or even the explosive growth in even just the word "app":



I've been looking at growth charts for twenty years now, and I don't recall ever seeing such consistent, clear and straight up pure growth in any industry like we are about to see in the app world. The growth in those charts are just getting started.

We’re talking about a target market of billions of people using hundreds of billions of apps reading literally trillions of articles about apps, app reviews, app news, app devices, app games, app-anything.

Remember in 1996 and 1997, when you’d not only heard of the Internet and its wonders, but you’d actually at some point started using that new “browser” technology to engage the “world wide web”? Yeah, the early adopters had already been “surfing the Net” for years and we were finally hitting “critical mass” for email, as the vast majority of Americans were signing up for their first accounts at AOL, Yahoo, and Hotmail.

And as all these masses of people around the globe started getting on the Internet and realizing just how massive a marketplace it was becoming and then started to see that we’d never consume telephone services, video (TV, movies, and user-gen), fax, and most any other communication or connective technology the same again, the bubbles started brewing. That whole World Wide Web thing was democratizing publishing, marketplaces, stock and so much more. And these same masses rightly recognized that a “Wild West” marketplace was about to create vast fortunes were about and if you could get into the right stock/sector/idea, you’d probably make some great money.

And so we entered the 1998-2000 phase, where the term Internet Bubble was born during which for a couple years there, any company that had absolutely anything to do with the Internet would double, triple and quadruple in price. Sometimes in just few weeks’ time. And a lot of vast fortunes were indeed made in those heady days.

Of course, you had to sell when the bubble started popping in 2000. And it would take another five years or so, but eventually real, sustainable wildly huge fortunes were created by the Google’s, PriceLine’s, eBay’s and Baidu’s of the world.

But oh, what a time and place to be alive for anybody who got into the Internet game before the bubble had been blown. If you were early, say, in 1996, and you bought Cisco or privately invested in just about any company that facilitated Internet delivery of the World Wide Web, you made a ton of money by the time the bubble was blown up for all to see. If you started a web-company — most any kind of web company, mind you (see TheGlobe.com, Pets.com, Webvan, K-Tel, and so on), you got a chance to sell into some of the wildest valuations and hysterias that you wouldn’t see again until the housing bubble peaked in 2006…or until China’s bubble popped in 2008.

And given that the same policies that seemed to fuel all these previous bubbles that we keep living and investing through have been given steroids, with the Fed constantly juicing the money supply in every way they can and with the fact that bubble after bubble after bubble in various sectors of the economy has gotten to be the rule and not the exception, I’ll preach some Revolution Investing ideology here and point out that you probably want to try to find the next sector mostly likely to bubble.

So get ready for the coming app-bubble. I mean, come on, you know that even as the early adopters have been using apps and smartphones for the last few years, it’s just now starting to become a mainstream phenomenon. This year some 250 million people will buy a smartphone, up from 150 million last year and on its way to more than a billion people in less than a decade from now. When was the last time you heard growth statistics for a marketplace that blew your mind like that? Yup, probably back when you first started researching ways to invest in the Internet.

And hopefully you were one of those people who got in that second phase, after the early adopters had worked through much of the bugs and the mainstream masses were just starting to get their first Internet accounts back in 1996/1997, right? And hopefully you're one of those people figuring out ways to invest in the app bubble now that the early adopters have worked through much of the bugs and the mainstream masses are just starting to get their first apps…right now in 2010/2011, baby!

If you thought the Internet bubble was wild, you ain't seen nothing yet. The potential for apps to change not just how we consume telephone, video, and social networking services like never before, but we also don't know just what kinds of Googles/Facebooks/Netflixes are going to be created this year, next year and the year after. After all, it wasn't until late 1998 that Sergei and Brin even started the company that would create the single largest fortune out of the Internet– Google, whose valuations are now measured by the hundreds-of-billions.

How many markets can you name that will double and triple in size in the next three to four years? How many multibillion dollar markets can you name that will grow like that? How many markets tap into what will eventually address two to three billion customers?

Whatever else you do with your investments, get into apps. Right now. The app bubble cometh.

Report Outline:

I. App platforms/software: (8 stocks)
Google, Apple, Microsoft, Oracle, Adobe, Neftlix, Symantec, Autocad

II. App gadget vendors: (7 stocks)
Motorola, Ericsson, Logitech, Nokia, Hewlett-Packard, Research in Motion, Dell

III. App component suppliers: (12 stocks)
Intel, Arm Holdings, AMD, SanDisk, Marvell, NSM, Nvidia, Texas Instruments, Qualcomm, Broadcom, O2Micro, TTM Technologies

IV. App network infrastructure: (6 stocks)
F5, Riverbed, Cisco, Juniper, Ciena, Alcatel-Lucent

V. App Infrastructure Component Suppliers: (3 stocks)
Oclaro, Finisar, JDSU

VI. App equipment contractors: (5 stocks)
Flextronics, Celestica, Jabil, Plexus, Sanmina

VII. App network providers: (6 stocks)
AT&T, Verizon, Sprint, Deutsche Telecom, Level 3, Global Crossing

VIII. App retailers: (3 stocks)
Radio Shack, Best Buy, Amazon

I. App platforms/software:

Company:	**GOOG - Google, Inc.**	
Summary:	Google not only provides the most frequently used search engine for the World Wide Web, they also own one of the two main platforms that Apps run on: the Android system.	
Balance Sheet:	Cash and Cash Equivalents:	10 B
	Short Term Investments:	14 B
	Long term Investments:	128 M
	Total Cash:	24.1B
	Total Debt:	--0
	Net Cash:	**24.1 B**
	Outstanding Shares:	319 M
	Net Cash / Share:	**75.54**
	Share Price:	595
	Enterprise Value / Share:	**520**
	Total Market Cap:	190 B
	Enterprise Value:	**166 B**
	2011 Sales Growth:	17.9%
	2011 Earnings Estimate:	33.37
	Enterprise Value Multiple:	**15 Times Forward Earnings**
	Dividend & Yield:	**N/A**

One of the truer purer-plays on the App Revolution is Google. Google's Android, while still not nearly as good overall in performance, ease-of-use, and battery-life as the iPhone (I've owned and played with many of each over the last year), has mind-boggling growth ahead of it. And like most of Google's best businesses, it's got huge profit margins, low reproduction and distribution costs, lots of disparate revenue streams and … did I mention something about growth above? Huge growth.

And there will likely be three major platforms battling it out for most of the 1.5 billion app phone buyers in 2010 — Symbian (driven by Nokia), Android (driven by Google) and iPhone (driven by Apple). There will be other platforms, but it's looking increasingly every day that they will be on a much smaller scale — Microsoft and Blackberry and perhaps HPQ's Palm, etc. Nokia's Symbian system will also grow. (Find out how we're trading Nokia in the Revolution Investing model portfolio by reading my recent newsletter dedicated to trading Nokia).

The stock's cheap, with an enterprise value now at less than 15-times next year's earnings, when you include the $24 billion plus in cash they have on their balance sheet — nearly $75 per share. That'll be closer to $100 billion or so in cash by 2020 and if the company grows earnings at just 15% per year for the next seven years, they'll be earning $90 a share. Throw a 20 multiple on that and add the $100 billion cash and guess where you end up? That's right, $2000 per share price target for Google.

Revolution Investing rating: 9/10

Company:	**AAPL - Apple, Inc.**	
Summary:	Apple makes computers, mobiles devices, digital music players and all kinds of devices that run connect with the Internet.	
Balance Sheet:	Cash and Cash Equivalents:	11 B
	Short Term Investments:	14 B
	Long term Investments:	25 B
	Total Cash:	50 B
	Total Debt:	--0
	Net Cash:	**50 B**
	Outstanding Shares:	917 M
	Net Cash / Share:	**55**
	Share Price:	308
	Enterprise Value / Share:	**253**
	Total Market Cap:	282 B
	Enterprise Value:	**232 B**
	2012 Sales Growth:	15%
	2012 Earnings Estimate:	21.94
	Enterprise Value Multiple:	**11 Times Forward Earnings**
	Dividend & Yield:	**N/A**

We are changing how we interact with the Internet as we move from browser-based/keyboard-based computing, to app-based/touch screen-based computing. And we're talking about a marketplace that Apple's platforms are set to dominate that move in billions of units per year — handsets, computers and TVs. Cars next?

The company's got $50 billion plus in their checking account. That's more than $55 per share. I bought the stock back when it was $7 per share because they had about $7.50 per share and I got to own Apple for free. When they launched the original iPod a week or so later, I was very pleased and held on for the ride that Steve Jobs took me on. His vision and Apple's execution of it have now added some $35 billion plus in cash to their coffers through good ol' fashioned earnings and cash flow in the last eight years. Not bad, eh? Expect to see Apple, Google, Cisco and Microsoft racing to be the first to have $100 billion in cash on the balance sheets. My bet would be with Apple to hit it first with Google a neck behind…Cisco and Softee will probably pay out dividends on that kind of cash before they'd hit $100 billion. But I digress. Point is, Apple's got tons of cash and cash is king as interest rates have to go higher over the next five years and money becomes more expensive.

The stock's still cheap, yes, even at $300 per share. And yes, even though it's up from $7 just eight short years ago. That's because of good ol' fashioned earnings again. The stock's only trading at 11 forward P/E multiple. And when you take into account all that cash, it's only a 12 price to enterprise value multiple. This, for a company growing earnings 20-30% per year and positioned to keep doing so for a decade.

Revolution Investing rating: 9/10

Company:	**MSFT - Microsoft Corporation**
Summary:	Microsoft develops, manufactures, and sells a wide range of software products for computers and mobile devices.

Balance Sheet:	Cash and Cash Equivalents:	5.5 B
	Short Term Investments:	31 B
	Long term Investments:	7.7 B
	Total Cash:	44.2 B
	Total Debt:	4.9 B
	Net Cash:	**39.3 B**
	Outstanding Shares:	8.5 B
	Net Cash / Share:	**4.6**
	Share Price:	26
	Enterprise Value / Share:	**21.4**
	Total Market Cap:	220 B
	Enterprise Value:	**180.7 B**
	2012 Sales Growth:	6.8%
	2012 Earnings Estimate:	2.68
	Enterprise Value Multiple:	**8 Times Forward Earnings**
	Dividend & Yield:	**.64 (2.5 %)**

Softee's plugging along with tens of billions of dollars of deferred revenues which provide about as stabile and clear look into a company's future fundamentals as any company on the planet. Softee's also turned so many of its biggest corporate customers onto subscription models that the non-deferred future revenue streams are also remarkably stabile and clear to see.

Then you throw on the potential for just about any of its lagging products, from Windows 7 to Windows Mobile to Zune, (okay, okay, that one stretches the mind too far-- Zune is never going to be a success) that no analyst on the planet would have built into his models and you could get excited about Softee for the first time in a long time, huh?

The company set the standard for cash generation that Google and Apple have both learned to follow, as Softee's still got more than $30 billion in net cash on the balance sheet even after paying out more than $30 billion in a one time special dividend back in 2004, not to mention the tens of billions its paid out in quarterly dividends since then too. The company will earn about $2.75 or so next year, which means we can buy this puppy at less than eight times earnings, when you subtract that huge cash balance from the market cap.

That's a very cheap stock for a company that will grow earnings at least twice as fast as the Standard & Poor's 500 will over the next five years. Less than 8 x earnings is nearly 40% off what you pay for the S&P 500 which trades closer to 15 times earnings right now.

Revolution Investing rating: 8/10

Company:	**ORCL - Oracle Corporation**		
Summary:	Oracle Corporation develops, manufactures and markets middleware software, application software and hardware systems worldwide.		
Balance Sheet:	Cash and Cash Equivalents:	9.9 B	
	Short Term Investments:	8.5 B	
	Long term Investments:	--0	
	Total Cash:	18.4 B	
	Total Debt:	11.5 B	
	Net Cash:	**6.9 B**	
	Outstanding Shares:	5 B	
	Net Cash / Share:	**1.38**	
	Share Price:	28	
	Enterprise Value / Share:	**26.6**	
	Total Market Cap:	141 B	
	Enterprise Value:	**134 B**	
	2012 Sales Growth:	6.9%	
	2012 Earnings Estimate:	2.19	
	Enterprise Value Multiple:	**12 Times Forward Earnings**	
	Dividend & Yield:	**.20 (.7%)**	

The story here is Oracle's new software/hardware combination of offerings, Exalogic and Exadata, which help corporations, media companies, banks and just about every other thing that will run apps work. And Exalogic and Exadata are catching huge traction, as the incredible leap in efficiency in running any kind of data-crunching intensive information makes these puppies pay themselves within months.

Oracle's long-been out strategizing its major competitors and the open source world by locking-in customers with proprietary offerings and creating de facto standard platforms with its software, but the brilliance of buying Sun Micro on the cheap with its huge net cash balance was pretty awesome. I just wish they'd stop wasting shareholder value by buying billions of dollars of their own shares and would up the dividend to a 3% plus yield.

Not as cheap as it could be right now, at 12x forward earnings, but in ten years I think it's a pretty good bet that Oracle will be higher than it is today.

Revolution Investing rating: 7/10

Company: **ADBE - Adobe Systems, Incorporated**

Summary:	Adobe Systems, Incorporated offers a line of creative business, web and mobile software and services.	
Balance Sheet:	Cash and Cash Equivalents:	999 M
	Short Term Investments:	900 M
	Long term Investments:	207 M
	Total Cash:	2 B
	Total Debt:	1 B
	Net Cash:	**1 B**
	Outstanding Shares:	508 M
	Net Cash / Share:	**2**
	Share Price:	29
	Enterprise Value / Share:	**27**
	Total Market Cap:	14.7 B
	Enterprise Value:	**13.7 B**
	2011 Sales Growth:	8.1%
	2011 Earnings Estimate:	2.12
	Enterprise Value Multiple:	**13 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Adobe Flash and the Apple ban thereof. Personally, I think we'll all be better off if we just move to HTML5 in lock stock, but I don't set the marketplace and the biggest question with Adobe is simply whether or not Flash will survive as the primary de facto standard video platform as we leave the browser-based web world and enter the app world. That said, Flash is used as a selling point in some Android campaigns even as I mentioned above that some of us actually don't like it anyway and it remains the king for now and unseating de facto standards in tech can be tough.

On the other hand, there's little switching costs to the end-user of Flash and as Apple's HTML5 push hits its own critical mass (as it has already), the end user can seamlessly migrate to a post-Flash world with little locking him into the past. The rest of Adobe's doing fine, but Flash will be a huge catalyst and the risk of losing its utter dominance in video viewing is frankly enough to keep me out of this stock.

But let's do the bottom up analysis while we're at it anyway. Over the last few years, the company's balance sheet has deteriorated and they've added debt and spent cash and they're now sitting with just a buck or two in net cash. Cash flow is great, as usual for a software company, and it's not like they're going to go out of business anytime soon. Analysts expect the company will earn a little over two bucks next year, up from slightly under two bucks this year on less than 10% sales growth. That gives us a 13-ish forward P/E for this company and that's just not cheap enough to justify the risks of losing video viewer dominance as we enter the app world so don't expect to see it anytime soon in the Marketwatch Revolution Investing model portfolio.

Revolution Investing rating: 4/10

Company: **NFLX - Netflix, Inc.**

Summary:	Netflix, Inc. provides online subscription rental services in the United States.	
Balance Sheet:	Cash and Cash Equivalents:	134 M
	Short Term Investments:	186 M
	Long term Investments:	--0
	Total Cash:	320 M
	Total Debt:	236 M
	Net Cash:	**84 M**
	Outstanding Shares:	52 M
	Net Cash / Share:	**1.6**
	Share Price:	173
	Enterprise Value / Share:	**171**
	Total Market Cap:	9 B
	Enterprise Value:	**8.9 B**
	2011 Sales Growth:	32.5%
	2011 Earnings Estimate:	3.8
	Enterprise Value Multiple:	**45 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Ten years ago, did you imagine that you'd no longer ship your CDs through the mail to Netflix and that the company would have figured out how to license and stream mainstream Hollywood content to you on your laptop…or your phone…or a tablet-pad touch screen computer?

The company quickly hits on the concept of critical mass and how important it is to reach so that you can become the de facto standard of the industry:

"Netflix has raced to become ubiquitous. In addition to PCs, more than 100 types of devices can stream Netflix movies to a TV, including game consoles and Internet TV set-top boxes like Roku and AppleTV. The company says 61 percent of its 15 million subscribers streamed movies in the second quarter."

And thusly, Netflix has already become a de facto standard for watching video in the 21st century. My mom and dad, aunt and uncle and two cousins all said to me this weekend in Dallas that they "Love watching Netflix." Netflix is now a winner because it's already hit such critical mass so early in this game.

The big problem of course is the crazy near-term valuation of this stock. The 45x forward earnings is daunting, but then again, this company's growth rate is still accelerating. Finally, the company's cost of programming is likely to increase in coming quarters and years as their own success will work against them in bargaining. A lot of moving pieces, but I'd still rather be long this one than short it over the next five years. Would love the opportunity to buy it below $100 again though.

Revolution Investing rating: 6/10

Company:	**SYMC - Symantec Corporation**		
Summary:	Symantec Corporation provides security, storage and systems management solutions to secure and manage information.		
Balance Sheet:	Cash and Cash Equivalents:	3 B	
	Short Term Investments:	15 M	
	Long term Investments:	58 M	
	Total Cash:	3.1 B	
	Total Debt:	1.9 B	
	Net Cash:	**1.2 B**	
	Outstanding Shares:	776 M	
	Net Cash / Share:	**1.5**	
	Share Price:	17	
	Enterprise Value / Share:	**15.5**	
	Total Market Cap:	13.3 B	
	Enterprise Value:	**12.1 B**	
	2012 Sales Growth:	5.9%	
	2012 Earnings Estimate:	1.54	
	Enterprise Value Multiple:	**10 Times Forward Earnings**	
	Dividend & Yield:	**N/A**	

Ever notice using Symantec software can be almost as annoying as just dealing with the crap it's supposed to keep off your computer? Well regardless, this is a company that's done a great job over the years of succeeding in creating a successful derivative market for protecting consumers from problems that shouldn't even exist in the first place.

But it's tough to keep all the bad stuff out of computers when they're constantly connected to the entire network of computers and servers and everything else on the Internet. Do you know what else is constantly connected to the Internet? That's right, smartphones. And while Symantec's already got an Android security software offering out there, it remains to be seen if Symantec can see the same success they've seen in what's now simply a cyclical business – protecting PCs.

At ten times next year's earnings the stock certainly is expensive, and activists are swarming the stock trying to figure out how to unlock more value for shareholders. This one's probably not got much downside below the teens, but it probably doesn't have much upside over the next few years either.

Revolution Investing rating: 5/10

Company:	**ADSK - Autodesk, Inc.**		
Summary:	Autodesk, Inc. is a design software and service company.		
Balance Sheet:	Cash and Cash Equivalents:	839 M	
	Short Term Investments:	162 M	
	Long term Investments:	125 M	
	Total Cash:	1.12 B	
	Total Debt:	--0	
	Net Cash:	**1.12 B**	
	Outstanding Shares:	227 M	
	Net Cash / Share:	**4.9**	
	Share Price:	33.6	
	Enterprise Value / Share:	**28.7**	
	Total Market Cap:	7.6 B	
	Enterprise Value:	**6.5 B**	
	2012 Sales Growth:	9.2%	
	2012 Earnings Estimate:	1.58	
	Enterprise Value Multiple:	**18 Times Forward Earnings**	
	Dividend & Yield:	**N/A**	

Back in 1994, Autodesk smartly decided to just forget trying to develop software for the Mac. As Intel-Window PCs stormed to 95% plus marketshare in the ensuing decade, Autodesk's CAD software for architects, engineers, construct, and so on, became a de facto standard too. Since Autodesk came public, the stock's generated some 5500% returns for shareholders, so they've obviously been doing something right.

Fast forward to 2010, and Autodesk is back to offering software for Apple Macs. And the company is developing some fantastic apps that will likely become just as much standards as their current CAD software is.

Another incredible tech company balance sheet, as the company's ended up with more than a billion in cash and absolutely no debt to speak of. It's not going to be an easy, straight up, kind of ride, but this is a company well-positioned to benefit from the app revolution. Though it will be a high-beta cyclical, growing and shrinking by a multiple of whatever the GDP is growing or shrinking by, over the next decade, I'd look for this stock to have some big returns for shareholders again.

Revolution Investing rating: 7/10

II. App gadget vendors:

Company:	**MOT - Motorola, Inc.**	
Summary:	Motorola offers technology products and services for mobile communications devices.	
Balance Sheet:	Cash and Cash Equivalents:	2.8 B
	Short Term Investments:	5 B
	Long term Investments:	525 M
	Total Cash:	8.3 B
	Total Debt:	3.4 B
	Net Cash:	**4.9 B**
	Outstanding Shares:	2.34 B
	Net Cash / Share:	**2**
	Share Price:	8
	Enterprise Value / Share:	**6**
	Total Market Cap:	19 B
	Enterprise Value:	**14.1 B**
	2011 Sales Growth:	10.4%
	2011 Earnings Estimate:	.51
	Enterprise Value Multiple:	**11.7 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Motorola and Nokia have been engaged in an epic battle for cell phone dominance, both peaking near 40% marketshare at various points for the last fifteen years. That means this company has successfully and profitably moved hundreds of millions of phones per year in years past.

That's down to 60 million lately, but Motorola's likely to see 10s of millions of unit growth in the next two years. Motorola's stock price, rather coincidentally, is likely to move in tandem with the company's cell phone market share — the stock's been in the single digits since the company's market share went to single digits and it used to be above $20 a share back when the company's market share was above 20%.

The upshot is that Motorola's still a pretty good long side bet here if only because they are so well positioned to take market share and their balance sheet is manageable and improving.

Revolution Investing rating: 6/10

Company:	**ERIC - LM Ericsson Telephone Company**	
Summary:	LM Ericsson Telephone Company Provides communications equipment to mobile and fixed network operators worldwide.	
Balance Sheet:	Cash and Cash Equivalents:	3.2 B
	Short Term Investments:	7.5 B
	Long term Investments:	1.8 B
	Total Cash:	12.5 B
	Total Debt:	4.2 B
	Net Cash:	**8.3 B**
	Outstanding Shares:	3.2 B
	Net Cash / Share:	**2.6**
	Share Price:	10.5
	Enterprise Value / Share:	**7.9**
	Total Market Cap:	33.8 B
	Enterprise Value:	**25.5 B**
	2011 Sales Growth:	7.2%
	2011 Earnings Estimate:	.86
	Enterprise Value Multiple:	**9 Times Forward Earnings**
	Dividend & Yield:	**.19 (1.9%)**

After growing earnings 44% last year, analysts are looking for another 22% in earnings growth next year, even as the topline for ERIC is only supposed to grow single digits. Margins are expanding and that helps juice earnings for the next couple years so long as the topline does expand at all.

And speaking of topline growth, ERIC builds and services all those new 3G/4G wireless networks that the carriers are scrambling to build out. Though its handset and joint venture with Sony is what most investors think of when they try to analyze ERIC, the fact is that this company really depends on continuing its long-held industry lead on wireless network equipment and services. Expect to see the services side of this business really grow over the next couple years as the demand for integrating, expanding and maximizing profitability from these new G networks explodes.

At 9x next year's earnings when you include the net cash on the balance sheet, along with a pretty decent 1.9% yield, ERIC's very cheap and likely headed higher over the next five years, though I wouldn't want to just blindly buy and forget about this one because when this phase of the app-enabling wireless network build is done, ERIC will be scrambling for new business like they were back in 2001-2003 after the carriers finished that network buildout cycle.

Revolution Investing rating: 7/10

Company:	**LOGI - Logitech International**	
Summary:	Logitech International in PC Navigation, Internet Communications and wireless devices.	
Balance Sheet:	Cash and Cash Equivalents:	319 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	319 M
	Total Debt:	--0
	Net Cash:	**319 M**
	Outstanding Shares:	176 M
	Net Cash / Share:	**1.8**
	Share Price:	20.5
	Enterprise Value / Share:	**18.7**
	Total Market Cap:	3.6 B
	Enterprise Value:	**3.3 B**
	2012 Sales Growth:	12.1%
	2012 Earnings Estimate:	1.2
	Enterprise Value Multiple:	**15 Times Forward Earnings**
	Dividend & Yield:	**N/A**

The big concern here is that as all of us use our smartphones and tablets and the apps that run on them ever more and we use our PCs and TVs ever less that people buy fewer Logitech-built webcams, keyboards, remote controls and so on. Logitech's work with Google TV would help the company a lot over the next few years if Google TV can somehow get access to the mainstream TV networks' content. But that won't be this year and that's likely to hurt Logitech in the very near term.

The company recently raised its long-term gross and operating margin guidance a few percentage points, to the high 30%s and the low teens, respectively. In the mid-teens or below where it was, this stock would look at lot like some of the other really cheap tech stocks in this report, but with the concerns I highlight about and with the stock already trading at 15x next year's earnings, I'd be leery of this one, but would love to buy it back in the mid-teens were we to get another chance to do so.

Revolution Investing rating: 3/10

Company:	**NOK - Nokia Corporation**
Summary:	Nokia sells mobile devices including smart phones. It will obtain some percentage of the mobile phone market and therefore benefit from the Apps that run on them.

Balance Sheet:	Cash and Cash Equivalents:	1.6 B
	Short Term Investments:	11 B
	Long term Investments:	960 M
	Total Cash:	13.5 B
	Total Debt:	--0
	Net Cash:	**13.5 B**
	Outstanding Shares:	3.7 B
	Net Cash / Share:	**3.6**
	Share Price:	10
	Enterprise Value / Share:	**6.4**
	Total Market Cap:	37.5 B
	Enterprise Value:	**24 B**
	2011 Sales Growth:	7.7%
	2011 Earnings Estimate:	.89
	Enterprise Value Multiple:	**7 Times Forward Earnings**
	Dividend & Yield:	**.41 (4 %)**

Nokia's a blue-chip company that dominates its industry with consistently more than 30% market share for the last decade and is right now paying a 4.5% yield, has $3.50 per share -- $13 billion -- in cash on the balance sheet with no debt whatsoever. The Finland-based company will earn about 75 cents per share this year and 85 cents per share next year. The stock is down 80% in the last year and half and the chart has finally stabilized and looks to be turning up. And the company is also a pure play on the fastest growing industry in the world and what will be the largest marketplace the planet has ever seen?

we've seen this playbook before with this very same stock at least twice already in my investing career. The company has been wildly profitable over the years generating billions in cash for shareholders -- but dominating an industry that sells a billion units per year already and is still growing and is actually seeing price increases as people migrate towards better and better smartphone technologies is a volatile place to be.

Thus, Nokia's stock has been wildly volatile over the years too. But if you can catch the Nokia cycles right, you can print money. The stock has fallen like this before and it's had several multi-hundred percent rallies over the years too.

Revolution Investing rating: 8/10

Company:	**HPQ - Hewlett-Packard Company**
Summary:	Hewlett-Packard provides many various types of products, technologies, software, printers and storage devices. As the App revolution unfolds, HP will no doubt benefit from all the additional storage devices needed

Balance Sheet:		
	Cash and Cash Equivalents:	13 B
	Short Term Investments:	55 M
	Long term Investments:	11.2 B
	Total Cash:	24.3 B
	Total Debt:	13.9 B
	Net Cash:	**10.4 B**
	Outstanding Shares:	2.27 B
	Net Cash / Share:	**4.58**
	Share Price:	42.5
	Enterprise Value / Share:	**37.9**
	Total Market Cap:	96.4 B
	Enterprise Value:	**86 B**
	2011 Sales Growth:	5.5%
	2011 Earnings Estimate:	5.11
	Enterprise Value Multiple:	**7 Times Forward Earnings**
	Dividend & Yield:	**.32 (.8 %)**

Is this a services company? A PC retailer? A force to be reckoned with in the tablet/smartphone hybrids of tomorrow? A consultancy? A software vendor?

Nobody really knows and nobody can really tell what will or what won't move the needle for these guys and that's why the stock trades at only 7x forward earnings, ex-cash. The yield is negligible and I don't know why we'd care. Neither, apparently, does anybody else, despite the potential for Hewlett to be a dark-horse in integrating all these technologies for the living room, game center, TV, car and smartphone. For that reason alone, you have to consider Hewlett-Packard a pretty good long-term bet. If in five years, they've broken up the company, there'd really be some sweet shareholder value unlocked. Break it up, as I outlined above and the stock would be worth $100 instead of $40.

Revolution Investing rating: 6/10

Company:	**RIMM - Research in Motion Limited**	
Summary:	Research in Motion manufactures and sells mobile devices, including smart phones. Although far behind Apple's i-phone and Google's Android, it too will have a share of Apps that will ultimately run on its phones.	
Balance Sheet:	Cash and Cash Equivalents:	1.5 B
	Short Term Investments:	360 M
	Long term Investments:	958 M
	Total Cash:	2.8 B
	Total Debt:	---0
	Net Cash:	**2.8 B**
	Outstanding Shares:	522 M
	Net Cash / Share:	**5.4**
	Share Price:	58
	Enterprise Value / Share:	**52.6**
	Total Market Cap:	30.6 B
	Enterprise Value:	**27.8 B**
	2012 Sales Growth:	14.3%
	2012 Earnings Estimate:	6.3
	Enterprise Value Multiple:	**8 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Apps and all things related to apps are in a huge growth cycle, and that while RIMM's rightly been punished for losing market share in the smart phone market, especially in the US, it's still going to show growth over the next few years -- despite continuing to lose smart phone market share along the way.

The virtuous cycles that critical mass brings to a tech company, has recently ended for RIMM. RIMM had critical mass for the enterprise email solutions for a decade, but the technology has been creatively destructed by the very similar and more flexible (though still slightly less reliable) email/message/social-networking capabilities of the iPhone and Android…which, as I wrote yesterday, are just starting to see the virtuous cycles that come from critical mass.

How do you know when a company's got critical mass, or for that matter, when they're starting to get it or when they're losing it? There's not set formula, of course. You've got to watch the trends, the technologies, the companies, the consumers actions and where the developers are going.

Revolution Investing rating: 2/10

Company:	**DELL - Dell, Inc.**
Summary:	Dell designs, manufactures and sells computer systems. They also make Android tablets which will run hundreds of thousands of Apps.

Balance Sheet:	Cash and Cash Equivalents:	10.6 B
	Short Term Investments:	373 M
	Long term Investments:	1.1 B
	Total Cash:	12 B
	Total Debt:	3.4 B
	Net Cash:	**8.6 B**
	Outstanding Shares:	1.9 B
	Net Cash / Share:	**4.53**
	Share Price:	14
	Enterprise Value / Share:	**9.47**
	Total Market Cap:	27 B
	Enterprise Value:	**18.4 B**
	2012 Sales Growth:	5.7%
	2012 Earnings Estimate:	1.44
	Enterprise Value Multiple:	**6.5Times Forward Earnings**
	Dividend & Yield:	**N/A**

At 6.5x next year's earnings, Dell's about as cheap as a classically cyclical stock can get. The company used to steadily grow its huge cash flows along with its top line as it became a great American success story by building great PCs in 1990s. But it's now truly dependent upon the broader economy to grow as reflected by its puny, single expected top line growth rate.

If they'd pay a yield with some of the huge cash pile they've got instead of wasting shareholder money buying back shares, the stock would be a better investment as they try to figure out how to benefit from the app revolution. Their first Android Tablet might not have caught traction, but at least it showed innovation and risk-taking.

In the meantime, the company is a pureplay on the corporate spend cycle, which is itself rather dependent upon the broader macro-economy.

Revolution Investing rating: 6/10

III. App component suppliers:

Company:	**INTC - Intel Corporation**	
Summary:	Intel is the biggest seller of microprocessors in the world. Microprocessors are the "guts" inside all those computers and devices that will ultimately be running the Apps.	
Balance Sheet:	Cash and Cash Equivalents:	4 B
	Short Term Investments:	10 B
	Long term Investments:	5 B
	Total Cash:	19 B
	Total Debt:	2 B
	Net Cash:	**17 B**
	Outstanding Shares:	5.58 B
	Net Cash / Share:	**3**
	Share Price:	21
	Enterprise Value / Share:	**18**
	Total Market Cap:	118 B
	Enterprise Value:	**101 B**
	2011 Sales Growth:	3.5%
	2011 Earnings Estimate:	1.95
	Enterprise Value Multiple:	**9 Times Forward Earnings**
	Dividend & Yield:	**.63 (3 %)**

Intel's out-researched, out-spent, out-hustled, out-lobbied, out-grown and out-and-out beat AMD, Transmeta and anybody else who's tried to compete against this incredible company in the PC processor business. After decades of on-again, off-again focus and success in the mobile business, Intel has become fully engaged and locked and loaded on mobile and smartphones. Watch out, everybody else, especially Qualcomm.

Wall Street hates this company right now, apparently, as it only rewards the best year of earnings and revenues in the company's amazing history with a 9x forward multiple. With a 3% yield, the company's paying out more than Treasuries and they've got $17 billion net cash on their balance sheet. And they'll spend an extra billion or two if and when we got into the next recession and that'll really set them up for blowing away the competition on the flipside of whenever that downturn will come, be it now or in five years. In other words, Intel's a must-own for anybody with a ten-year or more time horizon.

Revolution Investing rating: 9/10

Company: **ARMH - ARM Holdings plc**

Summary:	ARM Holdings plc designs microprocessors, physical intellectual property, technology and software to enhance the performance of high volume embedded applications.	
Balance Sheet:	Cash and Cash Equivalents:	65 M
	Short Term Investments:	173 M
	Long term Investments:	15 M
	Total Cash:	253 M
	Total Debt:	--0
	Net Cash:	**253 M**
	Outstanding Shares:	440 M
	Net Cash / Share:	**.58**
	Share Price:	18.5
	Enterprise Value / Share:	**18**
	Total Market Cap:	8.2 B
	Enterprise Value:	**7.9 B**
	2011 Sales Growth:	8.2%
	2011 Earnings Estimate:	.44
	Enterprise Value Multiple:	**41 Times Forward Earnings**
	Dividend & Yield:	**.10 (.6%)**

Here's one of the few technology stocks out there that's actually pricing in some good-case-scenarios. The company's become rather high-profile since it became an underlying technology supplier to the iPhone. And increasingly, the company's chips are also powering Android, Windows and Symbian phones too. ARM Holdings mostly licenses their technology to the likes of Samsung, Texas Instruments and Broadcom which then either make the chips themselves or pay companies in Taiwan to make the actual chips. We're talking tens of billions of chips out there based on ARM Holdings technology.

But as it's become higher profile, so too has the stock already priced in a lot of growth. At 41x net year's earnings, and with a market cap that's more than 40 times larger than the cash the company's been able to put on the balance sheet so far, there's a lot of risk in this stock. Intel's focusing all its might and know-how on their own mobile processors now and ARM could end up to the mobile processor world what AMD became to the PC world.

Over the next few quarters, well into 2012, this company should continue to show impressive growth and draw more momentum. But I'm not sure I'd want to own this one for the long-haul. Intel's a better play and it's a much more compelling valuation.

Revolution Investing rating: 5/10

Company: **AMD - Advanced Micro Devices, Inc.**

Summary:	Advanced Micro Devices, Inc. provides semiconductors for servers, personal computers, notebooks and all kinds of electronic devices.	

Balance Sheet:	Cash and Cash Equivalents:	1.6 B
	Short Term Investments:	1 B
	Long term Investments:	--0
	Total Cash:	2.6 B
	Total Debt:	4.3 B
	Net Cash:	**-1.7 B**
	Outstanding Shares:	681 M
	Net Cash / Share:	**-2.5**
	Share Price:	7.5
	Enterprise Value / Share:	**10**
	Total Market Cap:	5 B
	Enterprise Value:	**6.7 B**
	2011 Sales Growth:	.3%
	2011 Earnings Estimate:	.43
	Enterprise Value Multiple:	**23 Times Forward Earnings**
	Dividend & Yield:	**N/A**

"AMD Board Authorizes $300 Million Stock Repurchase Program." So read an actual headline back in 2001, when AMD for a brief moment in time, actually caught and leap-frogged ahead of Intel in the PC processor wars, mainly because the company's chips ran cooler and saved on electricity with sacrificing much if any performance vs. Intel. The stock was at above $20 a share. Within a couple more years though, AMD was scrambling to raise money once again. And at much lower prices than they'd been buying their own stock at earlier. As in the single digits.

Meanwhile, the company's now got more than $4 billion in debt on their balance sheet, leaving them as one of the few major American semiconductor companies with net debt on their balance sheet. As in $1.7 billion in net debt. That debt makes the company much more expensive and much less flexible in what it can spend in trying to stay up with Intel, which would be tough even with a clean balance sheet. Life's too short.

Revolution Investing rating: 2/10

Company:	**SNDK - SanDisk Corporation**

Summary:	SanDisk Corporation designs, develops, manufactures and sells flash storage card products used in various consumer electronic products.	
Balance Sheet:	Cash and Cash Equivalents:	1.1 B
	Short Term Investments:	819 M
	Long term Investments:	2.6 B
	Total Cash:	4.5 B
	Total Debt:	934 M
	Net Cash:	**3.6 B**
	Outstanding Shares:	234 M
	Net Cash / Share:	**15.4**
	Share Price:	40
	Enterprise Value / Share:	**24.6**
	Total Market Cap:	9.4 B
	Enterprise Value:	**5.8 B**
	2011 Sales Growth:	7.6%
	2011 Earnings Estimate:	3.71
	Enterprise Value Multiple:	**6.6 Times Forward Earnings**
	Dividend & Yield:	**N/A**

This company has really added the cash from good ol' profits in the last decade. And that's really one of the remarkable stories here at Sandisk – the impressive balance sheet. We're talking about $15 per share in net cash – more than a third of the stock's market cap. With Apple using flash in just about every mobile product they make these days, including the MacAir, Sandisk and the other flash players are scrambling to add capacity.

With more video, more apps, and more games and more content and more everything on your smartphone and tablet, we'll need more and more and more flash drives. As long as Sandisk can continue to execute this highly competitive business as well as it has been, there'll be more and more and more demand for Sandisk shares too.

Revolution Investing rating: 7/10

Company:	**MRVL - Marvell Technology Group, Ltd**	
Summary:	Marvell Technology Group, Ltd. designs, develops and markets embedded microprocessor integrated circuits that go into all kinds of electronic gadgets.	
Balance Sheet:	Cash and Cash Equivalents:	1.1 B
	Short Term Investments:	691 M
	Long term Investments:	34 M
	Total Cash:	1.8 B
	Total Debt:	511 M
	Net Cash:	**1.3 B**
	Outstanding Shares:	650 M
	Net Cash / Share:	**2**
	Share Price:	20
	Enterprise Value / Share:	**18**
	Total Market Cap:	13 B
	Enterprise Value:	**11.7 B**
	2012 Sales Growth:	11.2%
	2012 Earnings Estimate:	1.71
	Enterprise Value Multiple:	**10.5 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Marvell's got some great exposure in providing chips to the Apple, RIMM, and other smartphone vendors. But then again, Marvell supplies the hard drive manufacturers like WDC and STX too. And Marvell also supplies the telecom equipment vendors with chips too. So we got one great market, one cyclical market and one high-beta cyclical market.

That makes this one great stock to own at the depths of a recession when its been crushed. And that makes this one great stock to short at the heights of great economic booms when it looks like it'll have to scramble to meet demand forever.

We're probably somewhere in the middle of those two extremes right now with the stock at 10x forward earnings. There are better fish to fry out there.

Revolution Investing rating: 6/10

Company:	**NSM - National Semiconductor Corporation**	
Summary:	National Semiconductor Corporation designs, develops and markets embedded microprocessor integrated circuits that go into all kinds of electronic gadgets.	
Balance Sheet:	Cash and Cash Equivalents:	1 B
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	1 B
	Total Debt:	1 B
	Net Cash:	**--0**
	Outstanding Shares:	235 M
	Net Cash / Share:	**0**
	Share Price:	13.5
	Enterprise Value / Share:	**13.5**
	Total Market Cap:	3.1 B
	Enterprise Value:	**3.1 B**
	2012 Sales Growth:	4%
	2012 Earnings Estimate:	1.34
	Enterprise Value Multiple:	**10 Times Forward Earnings**
	Dividend & Yield:	**.40 (3%)**

NSM makes lots of different chips for cars, for computers and for smartphones. Its analog chips interface between the digital and analog world, such as say, taking your voice and turning it into bits an bytes that are then sent wirelessly to someone on another handset where another analog chip turns those bits and bytes into sound for their eardrum to process. Pretty nifty stuff when you think about it really.

But not nearly as tough to make as say, processor chips like Intel does, which does much more than just interface between the real world and the virtual one via just one medium at a time. So the margins here are a lot smaller than they are at Intel.

And this is mostly a cyclical company at this point. Trading at just 10x next year's earnings and with a sweet 3% dividend yield, there's some valuation arguments to be made by the bulls. But not enough to get me excited about the future upside here.

Revolution Investing rating: 4/10

Company:	**NVDA - Nvidia Corporation**		
Summary:	Nvidia Corporation provides visual technologies that display graphics on PC's and mobile devices. As smart phones proliferate, Nvidia's visual technologies should benefit as in graphics are used on the devices.		
Balance Sheet:	Cash and Cash Equivalents:	447 M	
	Short Term Investments:	1.3 B	
	Long term Investments:	--0	
	Total Cash:	1.7 B	
	Total Debt:	24.4 M	
	Net Cash:	**1.67 B**	
	Outstanding Shares:	577 M	
	Net Cash / Share:	**2.9**	
	Share Price:	13.7	
	Enterprise Value / Share:	**10.8**	
	Total Market Cap:	7.9 B	
	Enterprise Value:	**6.23 B**	
	2012 Sales Growth:	3.1%	
	2012 Earnings Estimate:	.74	
	Enterprise Value Multiple:	**15 Times Forward Earnings**	
	Dividend & Yield:	**N/A**	

Nvidia's a company that if you can catch just the cycle's right with it, you can make some huge coin in both directions. When the company catches up with its competitors, it usually blows by them for a few years and the earnings explode. Then, just as the company looks set to take over the world and its market cap starts to rival the great Intel's, the company collapses again as the cycle bypasses them. The question is, where exactly is Nvidia right now in that technological/macroeconomic cycle.

The stock's still down more than 60% from its highs from the most recent cycle, but it's up 150% from its lows during the economic financial crisis. That's a tough proposition, though I'd rather be long than short it because the upside of really catching some traction in the higher margin smartphone business could take the stock to $50 at some point in the next decade.

Revolution Investing rating: 6/10

Company:	**TXN - Texas Instruments Incorporated**		
Summary:	Texas Instruments manufactures and sells semi-conductor chips to all kinds of electronic devices. While the App revolution drives device sales, TXN will benefit from the demand for semi-conductors that go into the devices.		
Balance Sheet:	Cash and Cash Equivalents:	1.2 B	
	Short Term Investments:	1.7 B	
	Long term Investments:	637 M	
	Total Cash:	3.5 B	
	Total Debt:	---0	
	Net Cash:	**3.5 B**	
	Outstanding Shares:	1.17 B	
	Net Cash / Share:	**3**	
	Share Price:	32	
	Enterprise Value / Share:	**29**	
	Total Market Cap:	37.5 B	
	Enterprise Value:	**34 B**	
	2011 Sales Growth:	1%	
	2011 Earnings Estimate:	2.54	
	Enterprise Value Multiple:	**11 Times Forward Earnings**	
	Dividend & Yield:	**.52 (1.7 %)**	

Texas Instruments has long been a quietly revolutionary company, and the fact that they've maintained their dominance in the highly competitive, lower margin processor businesses (relative to say, Intel) they dominate is a testament to focusing on good ol' fashioned hustle. Wall Street seems to pretty much like to pay between 10 and 15x forward earnings for this steady grower that pays a decent dividend of 1.7%.

Right now at 11x next year's earnings it's in that range, and it's a decent hold for anybody with a ten year time horizon or more.

Revolution Investing rating: 5/10

Company:	**QCOM - Qualcomm Incorporated**	
Summary:	Qulacomm supplies wireless digital wireless communication products. They own the rights to CDMA technology which is used by many telecommunication companies in providing wireless internet services.	
Balance Sheet:	Cash and Cash Equivalents:	3.5 B
	Short Term Investments:	6.7 B
	Long term Investments:	8.1 B
	Total Cash:	8.3 B
	Total Debt:	--0
	Net Cash:	**8.3 B**
	Outstanding Shares:	1.6 B
	Net Cash / Share:	**5.2 B**
	Share Price:	48
	Enterprise Value / Share:	**42.8**
	Total Market Cap:	77.6 B
	Enterprise Value:	**69.3 B**
	2012 Sales Growth:	8.5%
	2012 Earnings Estimate:	3.00
	Enterprise Value Multiple:	**14 Times Forward Earnings**
	Dividend & Yield:	**.76 (1.6 %)**

At 14x next year's earnings and with a pretty decent yield of 1.6%, it's tough not to be bullish about Qualcomm. In fact, given the big rally that this stock has had, up 50% in the last couple months, it's surprising to see Qualcomm's yield is that high and enterprise value to earnings ratio is so low.

Qualcomm's certainly positioned for huge growth in the next few quarters as its leading edge SnapDragon processors are driving most Android phones, which are taking huge marketshare on on a huge growth trajectory for the next few quarters at least. QCOM currently integrates GPS, Bluetooth and FM tuners into most of its chipsets, and WiFi will soon be fully integrated into Qualcomm chips too, making phone smaller, more efficient and cheaper. Longer-term, it gets trickier with Qualcomm, as Intel, Texas Instruments and all those other big competitors will work to leapfrog each other back and forth. That makes Qualcomm a strong buy for through 2012 or so and then all bets are off. Or should be.

Revolution Investing rating: 6/10 (8/10 till 2012, though)

Company:	**BRCM - Broadcom Corporation**	
Summary:	Broadcom manufactures semi-conductors for wired and wireless communication devices. As the App revolution drives more wireless devices, Broadcom stands to benefit in providing semi-conductors that go into those devices.	
Balance Sheet:	Cash and Cash Equivalents:	1.4 B
	Short Term Investments:	532 M
	Long term Investments:	439 M
	Total Cash:	2.37 B
	Total Debt:	--0
	Net Cash:	**2.37 B**
	Outstanding Shares:	511 M
	Net Cash / Share:	**4.6**
	Share Price:	43
	Enterprise Value / Share:	**38.4**
	Total Market Cap:	22 B
	Enterprise Value:	**19.6 B**
	2011 Sales Growth:	12%
	2011 Earnings Estimate:	2.91
	Enterprise Value Multiple:	**13 Times Forward Earnings**
	Dividend & Yield:	**.32 (.8 %)**

One of the places where Broadcom dominates the smartphone business is in supplying the chips that make Wifi work in your iTouch, iPhones, iPads, and most Androids too. But Qualcomm's move to integrate Wifi into their smartphone chips is one of the reasons Broadcom's trading at only 13x next year's earnings, ex-cash.

On the other hand, much like Qualcomm itself, this company's likely to continue to show some nice growth and momentum for each of the next few quarters and that means, much like Qualcomm, it's also a great trade for the next couple years. Other than Intel, I'm not confident in predicting who will be dominant in the smartphone chip world five years out and more from now.

Revolution Investing rating: 6/10 (7/10 through 2012 though)

Company:	**OIIM - O2Micro International Limited**	
Summary:	O2Micro develops semi-conductor components that go into electronic devices. They supply components for Apple's i-Pad. As the App revolution takes off and more i-pads sell like hot cakes, O2Micro should benefit.	
Balance Sheet:	Cash and Cash Equivalents:	39 M
	Short Term Investments:	74 M
	Long term Investments:	15 M
	Total Cash:	128 M
	Total Debt:	--0
	Net Cash:	**128 M**
	Outstanding Shares:	33.5 M
	Net Cash / Share:	**3.8**
	Share Price:	6
	Enterprise Value / Share:	**2.2**
	Total Market Cap:	203 M
	Enterprise Value:	**75 M**
	2011 Sales Growth:	3.9%
	2011 Earnings Estimate:	.43
	Enterprise Value Multiple:	**5 Times Forward Earnings**
	Dividend & Yield:	**N/A**

This is one cheap stock. Trading at only $3 per share excluding cash, this company's operations are valued by Wall Street as being worth only worth $75 million. The company says its supposed to benefit from each iPad but the most recent quarter was down nearly 15% year over year.

If the company spent more time focusing on growing business and less time trying to convince Wall Street and the media at large about how great their growth business is, we might see some better results. I'm not impressed and neither is Wall Street.

Were this company to actually show any growth, the stock will go to $15. Otherwise, these guys will be to the iPad what Alvarion was to Wifi and the stock will trade at about that $3 per share cash that they've got.

Revolution Investing rating: 4/10

Company:	**TTMI - TTM Technologies**	
Summary:	TTM Manufactures printed integrated circuit boards. They supply components to the i-pad.	
Balance Sheet:	Cash and Cash Equivalents:	214 M
	Short Term Investments:	1 M
	Long term Investments:	--0
	Total Cash:	215 M
	Total Debt:	139 M
	Net Cash:	**76 M**
	Outstanding Shares:	80 M
	Net Cash / Share:	**.95**
	Share Price:	13.4
	Enterprise Value / Share:	**12.4**
	Total Market Cap:	1 B
	Enterprise Value:	**924 M**
	2011 Sales Growth:	24.9%
	2011 Earnings Estimate:	1.5
	Enterprise Value Multiple:	**8 Times Forward Earnings**
	Dividend & Yield:	**N/A**

This is another one of those iPad suppliers, much like OIIM that you just can't believe how cheap it really is. This company that makes the lower margin printed circuit boards inside of the iPad doesn't have nearly as much cash per share as OIIM, but it's trading at only 8x next years earnings.

The problem is that they keep having to guide the next quarter lower than Wall Street keeps modeling. It's become a vicious cycle of overpromising and under delivering and the stock price reflects that here.

If the company can actually deliver on the 25% topline growth that the analysts are modeling for next year, this stock will get a 15x multiple and give you a double from here.

On the other hand, I wouldn't want to just blindly own this one for the next decade as the component supply game will shift with each passing iteration of the iPad.

Revolution Investing rating: 5/10

IV. App network infrastructure:

Company:	**FFIV - F Five Networks, Inc.**	
Summary:	FFIV's technology manages and optimizes data traffic over the internet.	
Balance Sheet:	Cash and Cash Equivalents:	110 M
	Short Term Investments:	206 M
	Long term Investments:	257 M
	Total Cash:	573 M
	Total Debt:	--0
	Net Cash:	**573 M**
	Outstanding Shares:	80 M
	Net Cash / Share:	**7.15**
	Share Price:	121
	Enterprise Value / Share:	**114**
	Total Market Cap:	9.6 B
	Enterprise Value:	**9 B**
	2012 Sales Growth:	22%
	2012 Earnings Estimate:	4.3
	Enterprise Value Multiple:	**26 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Everywhere you look convergence is hitting us and having an impact on business models. It turns out users really do want to be in control, and that includes consuming all forms of content from all kinds of devices – from cell phone to laptop to car stereo – at any given. None of these forms of content was originally designed for access over a computer network. Enabling the convergence of these disparate forms of content requires lots of technology working behind the scenes. And it requires ever more investment in that technology in order to boost capacity, storage and efficiency. And the single purest play on all this convergence is F5, whose technologies are being designed into essentially every media-rich network that delivers on the promise of convergence. F5 makes equipment and software that make these new networks run. Just as Cisco (and later, Juniper) routers were integral to the first stages of the internet, so, too, are F5's products integral to today's robust and bandwidth-heavy networks.

Whether we're talking about video-enabled search downloads from Google and CBS or the latest customer relations software from Oracle, F5's load balancing, security and quality control enablers are necessary. In fact, F5's products are required pretty much no matter what the multimedia application. F5, in some sense then, is the company that enables the exploding "convergence" that is taking place all around us.

At 26x times next year's earnings, the stock's not exactly cheap, but the 22% topline growth that Wall Street's analysts are looking for is too low and I expect this stock will be another two or three times higher than these levels today before 2020.

Revolution Investing rating: 9/10

Company:	**RVBD - Riverbed Technology, Inc.**	
Summary:	Riverbed's technology helps to improve the performance of applications run over the web. As Apps become more and more prevalent in our day to day life, how quickly and efficiently they run will be an ever important concern. Riverbed's wares will be in high demand to address this need.	
Balance Sheet:	Cash and Cash Equivalents:	67 M
	Short Term Investments:	257 M
	Long term Investments:	0
	Total Cash:	324 M
	Total Debt:	--0
	Net Cash:	**324 M**
	Outstanding Shares:	147 M
	Net Cash / Share:	**2.20**
	Share Price:	30
	Enterprise Value / Share:	**28**
	Total Market Cap:	4.5 B
	Enterprise Value:	**4.2 B**
	2011 Sales Growth Est:	25%
	2011 Earnings Est.:	.76
	Enterprise Value Multiple:	**36 Times Forward Earnings**
	Dividend & Yield:	**N/A**

One of the next big things in the app revolution will be proprietary corporate and other business apps. Sales people in big corporations will inevitably use apps from not only the big software vendors like CRM for customer resource and Oracle for human resource apps. And likewise, they'll be using many other apps on their Android, iPhone and other smartphones to monitor and input data and updates.

And all those apps run better, faster, more efficiently and even cheaper by requiring less server and computing power when they run over a network built on Riverbed Technology. Riverbed makes apps run better and with billions of apps and trillions of app interactions being utilized every day, ten years from today, Riverbed's going to be scrambling to meet the demand.

Wall Street's only looking for 25% growth from this company, but the company is still in a huge growth phase of adding new customers and getting its technology built into new networks. There's a lot of leverage to each new dollar of sales and earnings will outpace that topline growth by 2 to 1 for a long time.

Revolution Investing rating: 9/10

Company:	**CSCO - Cisco Systems, Inc.**	
Summary:	Cisco sells all kinds of networking products to help connect computers to the internet. It also sells security products, storage systems and those giant routers that rout data from device to device. The App revolution is only going to increase the need for data to be transferred, storage systems to house data and the proper security within the networks to protect against fraud and viruses.	
Balance Sheet:	Cash and Cash Equivalents:	4.5 B
	Short Term Investments:	35 B
	Long term Investments:	0
	Total Cash:	39.5 B
	Total Debt:	12 B
	Net Cash:	**27.5 B**
	Outstanding Shares:	5.6 B
	Net Cash / Share:	**4.9**
	Share Price:	19.5
	Enterprise Value / Share:	**14.6**
	Total Market Cap:	110 B
	Enterprise Value:	**82.5 B**
	2012 Sales Growth:	11%
	2012 Earnings Estimate:	1.84
	Enterprise Value Multiple:	**8 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Cisco, along with Juniper, has a duopoly on making the Internet run. The Internet is the network that underlies the world wide web that we all love to access via the browser app on our PCs and MacBooks. The Internet is also the framework that smartphone apps use to access data, video, words, audio, games and all the other content that you consume and produce using those apps.

With nearly 70% gross margins, this has long been one of the biggest cash-generating companies of our lifetimes. Duopolistic business can be very, very profitable so long as they maintain their duopolistic positioning, and Cisco's maintained its marketshare in the biggest, most important routing segments, of more than half of the entire market for many years now, as competitors and wannabes have come and gone.

With five bucks per share in net cash and trading at less than 8x next year's earnings, this stock has been left for dead despite the growth ahead for it.

Revolution Investing rating: 9/10

Company:	**JNPR - Juniper Networks, Inc.**
Summary:	Juniper Networks supplies network infrastructure needs for the world wide web. Like Cisco, it sells routers and switching products that control and direct data traffic over the internet. As Apps become more ingrained into our daily lives, the need for Juniper's products to manage the traffic flow will only increase.

Balance Sheet:	Cash and Cash Equivalents:	1.6 B
	Short Term Investments:	570 M
	Long term Investments:	483 M
	Total Cash:	2.65 B
	Total Debt:	--0
	Net Cash:	**2.65 B**
	Outstanding Shares:	523 M
	Net Cash / Share:	**5**
	Share Price:	35
	Enterprise Value / Share:	**30**
	Total Market Cap:	18.1 B
	Enterprise Value:	**15.5 B**
	2011 Sales Growth:	17%
	2011 Earnings Estimate:	1.53
	Enterprise Value Multiple:	**19 Times Forward Earnings**
	Dividend & Yield:	**N/A**

We used to nervously wonder if the plethora of router companies that came public in the height of the dot-com bubble days, such as Nexabit and Avici, would ever be able to break the stranglehold on the routers that the big service providers like the cable companies and telecom companies buy to run their Internet networks.

Well, no longer do we wonder that as only Cisco, Juniper and China-run Huawei have any meaningful market share at all. Cisco comes in at 55% global marketshare in the nearly $3 billion a year and still growing core router market. Juniper comes in at 31%, though Hauwei's growth from 8% marketshare to 12% has come almost entirely at Juniper's expense. Still, with nearly 70% gross margins, a HUGE installed base and a growing market, Juniper's got a lot of potential growth ahead of it too.

Revolution Investing rating: 6/10

Company:	**CIEN - Ciena Corporation**	
Summary:	Ciena Corporation provides networking equipment, that support the transport of data traffic over the internet.	
Balance Sheet:	Cash and Cash Equivalents:	485 M
	Short Term Investments:	563 M
	Long term Investments:	8 M
	Total Cash:	1 B
	Total Debt:	798 M
	Net Cash:	**202 M**
	Outstanding Shares:	93 M
	Net Cash / Share:	**2**
	Share Price:	14.5
	Enterprise Value / Share:	**12.5**
	Total Market Cap:	1.37 B
	Enterprise Value:	**1.17 B**
	2011 Sales Growth:	46.6%
	2011 Earnings Estimate:	.37
	Enterprise Value Multiple:	**33 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Ciena's one of the purest plays on the scramble amongst the big US telecom carriers to get their mobile broadband capabilities up to snuff. And as investors, we really can't downplay the competitive dynamics driving these carriers to spend and spend to try to create some sort of technological advantage over the others. Verizon's spending will be up 30% plus this year and next and Ciena's got some huge exposure to that spend, and also at AT&T and in just about every long-haul network from Level 3 to Global Crossing.

The company will do some $1.2 billon in sales this year, and if they can smoothly get past the integration of Nortel's optical networks acquisition, a good 30% of the $600 million in growth of the topline for next year could fall down to the bottom line. With 90 million shares outstanding that $180 million or so in earnings get us up near $2 per share in earnings, which would make the current $12.5 per share enterprise value more of a 6x forward earnings than a 33x as it appears when we use Wall Street's estimates.

I think this one's a good, though high-risk and high-beta, investment for the app revolution for the next three to five years.

Revolution Investing rating: 7/10

Company:	**ALU - Alcatel-Lucent**		
Summary:	Alcatel-Lucent provides products, solutions and transmission services that enable voice, video and data to be transported over the internet.		
Balance Sheet:	Cash and Cash Equivalents:	5.1 B	
	Short Term Investments:	2.8 B	
	Long term Investments:	86 M	
	Total Cash:	8 B	
	Total Debt:	6 B	
	Net Cash:	**2 B**	
	Outstanding Shares:	2.26 B	
	Net Cash / Share:	**.88**	
	Share Price:	2.9	
	Enterprise Value / Share:	**2**	
	Total Market Cap:	6.6 B	
	Enterprise Value:	**4.6 B**	
	2011 Sales Growth:	5.1%	
	2011 Earnings Estimate:	.18	
	Enterprise Value Multiple:	**11 Times Forward Earnings**	
	Dividend & Yield:	**N/A**	

Lucent has flirted repeatedly with bankruptcy in the last decade. This company, which was spun out of the AT&T monopoly, was used to simply being able to create the best and most expensive telecom equipment it could because the government would allow AT&T to charge a premium to get paid back for spending big bucks on that equipment. That's not the way telecom is done in the app revolution days, now is it. Lucent's still servicing and actually making money on their old local and long distance switches, but that's been a long-steadily declining business. And Lucent's still trying to compete effectively in selling the latest generation of wireless equipment to the big carriers.

Bet they wish they hadn't squandered billions of dollars on share buy backs when the stock was 1000% higher than it is today. These guys are to telecom what GM was to cars before it got bailed out and then nationalized. Nothing to see here, move along.

Revolution Investing rating: 2/10

V. App Infrastructure Component Suppliers:

Company:	**OCLR - Oclaro, Inc.**	
Summary:	Oclaro supplies optical components that go into fiber optic networks. As more and more devices are demanding data to be transmitted over the internet, fiber optic networks will be required to handle all that data transmission. Oclaro will provide components that go into those networks.	
Balance Sheet:	Cash and Cash Equivalents:	111 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	111 M
	Total Debt:	--0
	Net Cash:	**111 M**
	Outstanding Shares:	48 M
	Net Cash / Share:	**2.3**
	Share Price:	9.8
	Enterprise Value / Share:	**7.5**
	Total Market Cap:	470 M
	Enterprise Value:	**359 B**
	2012 Sales Growth:	11.7%
	2012 Earnings Estimate:	1
	Enterprise Value Multiple:	**7.5 Times Forward Earnings**
	Dividend & Yield:	**N/A**

If you account for all the reverse splits and name changes at this optical component supplier that was once called Bookham, the stock traded at more than $4000 a share back in 1999.

It was at $160 a share as recently as 2004. But now the stock trades at a level that genuinely reflects business today and this is a company that's actually survived the worst of times and, like Finisar and JDSU, can benefit from the post-consolidation phase of their post-collapse phase of their post-bubble days.

All that to say that at only 7x forward earnings when you include the net cash for more than $2 per share on the balance sheet, this stock could even be considered cheap. I don't like the competitive dynamics enough in the optical component supply business to this day though, and I'd be leery even as I'd be bullish on this one.

Revolution Investing rating: 6//10

Company:	**FNSR - Finisar Corporation**
Summary:	Finisar supplies optical components that go into fiber optic networks. As more and more devices are demanding data to be transmitted over the internet, fiber optic networks will be required to handle all that data transmission. Finisar will provide components that go into those networks.

Balance Sheet:		
	Cash and Cash Equivalents:	207 M
	Short Term Investments:	---0
	Long term Investments:	12.2 M
	Total Cash:	219.2 M
	Total Debt:	115 M
	Net Cash:	**104.2 M**
	Outstanding Shares:	76.5 M
	Net Cash / Share:	**1.35**
	Share Price:	19
	Enterprise Value / Share:	**17.65**
	Total Market Cap:	1.46 B
	Enterprise Value:	**1.24 B**
	2012 Sales Growth:	12.4%
	2012 Earnings Estimate:	1.71
	Enterprise Value Multiple:	**10 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Finisar's finally integrated many of the very smart acquisitions it made back in the great telecom depression days of the early 2000s. In the last few years, it's finally generating real cash and real earnings, and Wall Street has responded at times by running the stock way ahead of itself, only to let it crash back down again.

It's hard to believe this stock was literally trading at $2 a share, or just about one times what it will earn in 2012 back just last year. But it's also hard to believe that this stock once traded at more than $400 a share back in 1999.

The stock might hit $40 a share in the next few years during this ongoing network buildout growth phase, but it'll never see that twenty-fold increase from these levels to get back to even for its shareholders of a decade a ago.

Revolution Investing rating: 6/10

Company:	**JDSU - JDS Uniphase Corporation**	
Summary:	JDS Uniphase Corporation provides communications test equipment and optical products to service providers, cable companies and network equipment companies.	
Balance Sheet:	Cash and Cash Equivalents:	372 M
	Short Term Investments:	227 M
	Long term Investments:	5.1 M
	Total Cash:	604 M
	Total Debt:	267 M
	Net Cash:	**337 M**
	Outstanding Shares:	221 M
	Net Cash / Share:	**1.52**
	Share Price:	12
	Enterprise Value / Share:	**10.5**
	Total Market Cap:	2.6 B
	Enterprise Value:	**2.2 B**
	2012 Sales Growth:	9%
	2012 Earnings Estimate:	.87
	Enterprise Value Multiple:	**12 Times Forward Earnings**
	Dividend & Yield:	**N/A**

JDSU was once worth more than a $100 billion. They once bought other companies for tens of billions of dollars at pop. That was a long time ago, at least in Internet time – a full decade ago. Like Finisar and Bookham, this company will never, ever get back to those highs, but the stock's come down far enough and the company's done enough reverse splits that at the current $10 per share enterprise value, there's actually something to get excited about.

That said, I used to own this stock since it was at $2 a share before some of these splits and barely broke even after holding it and trading it for years. The company has a nasty habit of overpromising and then underdelivering. And I got sick of it, like most investors would. I'd wait to see if these guys can actually get two or three quarters in a row in which they're beating and raising the analysts' estimates. You'll have to pay up for the stock at that point, but it's better than another few years of dead money, which is what the stock will be if they can't start showing some impressive growth at some point.

Revolution Investing rating: 5/10

VI. App equipment contractors:

Company:	**FLEX - Flextronics International Ltd**	
Summary:	Flextronics International Ltd provides design and electronics manufacturing services in a range of products in the infrastructure, mobile communication devices, and computing industries.	
Balance Sheet:	Cash and Cash Equivalents:	1.9 B
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	1.9 B
	Total Debt:	1.9 B
	Net Cash:	**--0**
	Outstanding Shares:	766 M
	Net Cash / Share:	**--0**
	Share Price:	7
	Enterprise Value / Share:	**7**
	Total Market Cap:	5.4 B
	Enterprise Value:	**5.4 B**
	2012 Sales Growth:	7.2%
	2012 Earnings Estimate:	.97
	Enterprise Value Multiple:	**7 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Flextronics does the actual assembling and manufacturing of PCs, handsets and other equipment. For the last few years, RIMM has been a 10% plus customer for Flextronics and the growth at RIMM over the last decade has certainly helped this company through otherwise very cyclical times.

The good news for Flextronics shareholders is that this company is positioned to take market share from competitors in Asia which don't have quite the expertise and don't seem to be focusing on the smartphone business as much as FLEX is. These assembly businesses don't have much proprietary other than their factories, equipment and focus, which makes them very low margin businesses. But with this stock trading at 7x forward earnings, it's awfully cheap and likely at trough valuations here.

Revolution Investing rating: 7/10

Company:	**CLS - Celestica, Inc.**	
Summary:	Celestica Inc. provides electronic manufacturing services and solutions to equipment manufacturers in the consumer, communications, and enterprise computing sectors.	
Balance Sheet:	Cash and Cash Equivalents:	937 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	937 M
	Total Debt:	--0
	Net Cash:	**937 M**
	Outstanding Shares:	223 M
	Net Cash / Share:	**4.2**
	Share Price:	8.8
	Enterprise Value / Share:	**4.6**
	Total Market Cap:	1.9 B
	Enterprise Value:	**963 M**
	2011 Sales Growth:	11.9%
	2011 Earnings Estimate:	.97
	Enterprise Value Multiple:	**4.7 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Celestica makes Xbox 360s for Microsoft, handsets for RIMM also, and they're trying desperately to grow their Apple business. The fact that the company's got big exposure to the consumer is both a good and a bad thing. The good is that the consumer budgets for technology seem to be less dependent upon the broader economy than does the enterprise and carrier spend budgets for technology. The bad is that more exposure to just one segment over the others still makes you awfully vulnerable to shifts in spending in a smaller sample group.

And this is one contract manufacturer that has kept a war chest of net cash on the balance sheet, with more than nearly a billion dollars in the checking account, or almost half the entire market cap of the company. If you use that enterprise value metric you see that it's trading at less than five times cash flows and earnings. That gives some nice cushion and hopefully(?) a worst-case trading floor.

Revolution Investing rating: 8/10

Company:	**JBL - Jabil Circuit, Inc.**	
Summary:	Jabil Circuit Inc. provides electronic manufacturing services and solutions.	
Balance Sheet:	Cash and Cash Equivalents:	744 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	744 M
	Total Debt:	1 B
	Net Cash:	**-256 M**
	Outstanding Shares:	217 M
	Net Cash / Share:	**-1.1**
	Share Price:	15
	Enterprise Value / Share:	**16.1**
	Total Market Cap:	3.27 B
	Enterprise Value:	**3.52 B**
	2012 Sales Growth:	.9%
	2012 Earnings Estimate:	2.29
	Enterprise Value Multiple:	**7 Times Forward Earnings**
	Dividend & Yield:	**.28 (2%)**

Jabil's been focusing on expanding margins and making sure they get every little drop of earnings they can out of each dollar they generate in sales. Remember that this assembling and manufacturing is a very low margin business. But Jabil's done a good job of navigating the trends and they've got 10% exposure to RIMM handsets and they're making more handsets for new customers every day.

You got a pretty good 2% yield here and given that it's the only contract manufacturer that pays a dividend, that makes it more compelling than it would be other wise. That said, I wish they'd been building up a cash war chest instead of paying out dividends when they've got net debt of a quarter billion dollars on the balance sheet already.

Revolution Investing rating: 5/10

Company:	**PLXS - Plexus Corp**	
Summary:	Plexus Corp. provides contract electronic manufacturing services to original equipment manufacturers and other technology companies.	
Balance Sheet:	Cash and Cash Equivalents:	258 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	258 M
	Total Debt:	134 M
	Net Cash:	**124 M**
	Outstanding Shares:	40 M
	Net Cash / Share:	**3.1**
	Share Price:	28
	Enterprise Value / Share:	**24.9**
	Total Market Cap:	1.1 B
	Enterprise Value:	**25.5 B**
	2012 Sales Growth:	13.6%
	2012 Earnings Estimate:	2.88
	Enterprise Value Multiple:	**8.6 Times Forward Earnings**
	Dividend & Yield:	**N/A**

With exposure to both Juniper and GE, Plexus assembles the equipment for some of the biggest, baddest vendors on the planet. The companies been on a great growth run, growing 40% year over year for the last few quarters and is looking for more growth like that for the next couple quarters too. Of course, it becomes hard to grow a $2 billion revenue run rate another 40% when you're a somewhat cyclical business and this making equipment for other cyclical companies, by definition, is more than somewhat cyclical.

This one's probably not a big marketshare taker and their diversification away from just app-related manufacturing and assembly means that this one's not got as much upside as some of the contract manufacturers better exposed to the explosive app markets do. A decent net cash balance, no dividend and a valuation of less than 10x next years earnings, makes this one a hold. Neither a buy nor a sell, IMHO. Next!

Revolution Investing rating: 5/10

Company:	**SANM - Sanmina-SCI Corporation**	
Summary:	Sanmina-SCI Corporation provides integrated electronics manufacturing services worldwide.	
Balance Sheet:	Cash and Cash Equivalents:	899 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	899 M
	Total Debt:	1.23 B
	Net Cash:	**-331 M**
	Outstanding Shares:	76 M
	Net Cash / Share:	**-4.35**
	Share Price:	11
	Enterprise Value / Share:	**15.35**
	Total Market Cap:	882 M
	Enterprise Value:	**1.2 B**
	2012 Sales Growth:	6.3%
	2012 Earnings Estimate:	2.14
	Enterprise Value Multiple:	**7 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Sanmina's another contract manufacturer that the big, high profile technology companies outsource their manufacturing to. Sanmina's biggest customers include PC vendors, Lenovo, HPQ, Dell, along with Cisco and Nokia. So you can see that Sanmina's got outsized exposure to the PC market compared to its exposure to either the telecom infrastructure equipment and the handset business. For that reason alone, I'm leery about the longer-term upside of this company.

And then when you look at the less-than-stellar balance sheet with hundreds of millions of dollars of net debt, I'm even less comfortable with this stock. At 7x forward earnings, even after increasing the enterprise value by virtue of adding the net debt that any purchaser would acquire in buying this company to its market cap, the stock sure isn't expensive. Perhaps it's at a trough and could go up from here, but I don't think we'll look back in five or ten years and kick ourselves for not having put capital into this one.

Revolution Investing rating: 3/10

VII. App network providers:

Company: **T - AT&T Incorporated**

Summary: AT&T provides telecommunication services to businesses and consumers. AT&T will be part of the App Revolution by providing internet services to download apps.

Balance Sheet:

Cash and Cash Equivalents:	3.8 B
Short Term Investments:	---0
Long term Investments:	2.9 B
Total Cash:	6.7 B
Total Debt:	64.7 B
Net Cash:	**-58 B**
Outstanding Shares:	5.9 B
Net Cash / Share:	**-9.8**
Share Price:	28
Enterprise Value / Share:	**37.8**
Total Market Cap:	167 B
Enterprise Value:	**225 B**
2011 Sales Growth:	1.5%
2011 Earnings Estimate:	2.49
Enterprise Value Multiple:	**15 Times Forward Earnings**
Dividend & Yield:	**1.68 (6 %)**

Would AT&T even be in business if not for its iPhone exclusivity? I mean, the service really is bad enough to beg the question. The balance sheet that's loaded with tens of billions of dollars of net debt is problematic, even though its biggest competitors, Verizon and Sprint also have huge debt loads. It simply limits all these companies' ability to spend on innovation and acquisition.

All that said, AT&T and Verizon both generate such huge cash flows each year that they can fund tens of billions of dollars of network buildouts and upgrades and still pay that huge 6% dividend. On the final note, I'm a little bit worried about the long-term ability for AT&T to pay that dividend. If and when they lose iPhone exclusivity, the company will need all the money it can find to fight for dominance in say, 5G services.

Revolution Investing rating: 4/10

Company: **VZ - Verizon Communications, Inc.**

Summary: Verizon provides telecommunication services to businesses and consumers. Verizon will be part of the App Revolution by providing internet services to download apps.

Balance Sheet:	Cash and Cash Equivalents:	2 B
	Short Term Investments:	490 M
	Long term Investments:	3.5 B
	Total Cash:	6 B
	Total Debt:	55 B
	Net Cash:	**-49 B**
	Outstanding Shares:	2.8 B
	Net Cash / Share:	**-17.5**
	Share Price:	32
	Enterprise Value / Share:	**49.5**
	Total Market Cap:	92 B
	Enterprise Value:	**141 B**
	2011 Sales Growth:	1.8%
	2011 Earnings Estimate:	2.27
	Enterprise Value Multiple:	**22 Times Forward Earnings**
	Dividend & Yield:	**1.95 (6 %)**

I've seen Verizon whittle its net debt down from more than $60 billion a few years ago to less than $50 billion today. It's all the more impressive when you realize that the company paid all that debt down even as it spent nearly $100 billion on network upgrades to become by far the best wireless service provider in the country.

That 6% dividend is awfully tempting but even ignoring the debt load and just looking at the straight 16x forward earnings multiple, it's hard to get too excited. I think this one's probably a screaming buy at closer to 10x earnings and/or you could start to scale in here and really get aggressive in buying it as the yield gets above 8% (when the stock would be in the high $20s a share or so) if you've got a long-term time horizon of a five years or more.

Revolution Investing rating: 6/10

Company:	**S - Sprint Nextel Corporation**		
Summary:	Spint Nextel Corporation provides wireless and wireline communication products and services to consumers, businesses and governments. App related data will be transmitted over their communication lines.		
Balance Sheet:	Cash and Cash Equivalents:	3.8 B	
	Short Term Investments:	105 M	
	Long term Investments:	4.6 B	
	Total Cash:	8.5 B	
	Total Debt:	20.2 B	
	Net Cash:	**-11.7 B**	
	Outstanding Shares:	3 B	
	Net Cash / Share:	**-3.9**	
	Share Price:	4	
	Enterprise Value / Share:	**7.9**	
	Total Market Cap:	12 B	
	Enterprise Value:	**23.7 B**	
	2011 Sales Growth:	1.1%	
	2011 Earnings Estimate:	-.73	
	Enterprise Value Multiple:	**N/A**	
	Dividend & Yield:	**N/A**	

Sprint's also been an also ran, hasn't it? It was never quite a true incumbent local carrier, though it has over time acquired and sold a lot of incumbent local carrier assets. It always tried to follow MCI/Worldcom's lead in the competitive long distance carrier business. And now it's a distant third to AT&T and Verizon in the wireless world.

Give the company credit for at least betting serious and betting big on wireless, even if the Nextel acquisition looks quite a bit like they topticked the valuation on that company. And they've never really come back from overpaying for Nextel as the top.

Their 4G technologies are compelling, but not enough so to get anybody to leave the much better Verizon network or AT&T with its exclusive iPhone and other cool handsets.

Too much debt, too little cash flow and this company's in a tight spot.

Revolution Investing rating: 3/10

Company:	**DTEGY.PK - Deutsche Tele AG ADS**		
Summary:	Deutsche Tele AG ADS provides telecommunications and information technology services in Germany and internationally.		
Balance Sheet:	Cash and Cash Equivalents:	5 B	
	Short Term Investments:	2 B	
	Long term Investments:	1.8 B	
	Total Cash:	8.8 B	
	Total Debt:	41.8 B	
	Net Cash:	**-33 B**	
	Outstanding Shares:	4.36 B	
	Net Cash / Share:	**-7.5**	
	Share Price:	13.8	
	Enterprise Value / Share:	**21.3**	
	Total Market Cap:	60 B	
	Enterprise Value:	**93 B**	
	2011 Sales Growth:	-1%	
	2011 Earnings Estimate:	.99	
	Enterprise Value Multiple:	**21 Times Forward Earnings**	
	Dividend & Yield:	**N/A**	

DT owns and operates the T-Mobile network here in the US along with a plethora of other wireless and wireline telecom networking businesses around the globe. The company gets nicely subsidized by the German government, but that also means that they've got a lot of regulatory and bureaucratic nonsense to deal with.

The company's balance sheet looks remarkably like its larger US competitors at Verizon and AT&T, but there's no dividend for the American investor. And at 21x next year earnings when you include the debt and a 14x forward multiple for the traditional P/E, there's not much compelling about the valuation here. I'd figure the next decade will be a lot like the last decade for DT shareholders: 20% downside risk, 30% upside potential over the next decade.

Revolution Investing rating: 4/10

Company:	**LVLT - Level 3 Communications, Inc.**		
Summary:	Level 3 provides communication services in North America and Europe.		
Balance Sheet:	Cash and Cash Equivalents:	839 M	
	Short Term Investments:	--0	
	Long term Investments:	--0	
	Total Cash:	839 M	
	Total Debt:	5.75 B	
	Net Cash:	**-4.9 B**	
	Outstanding Shares:	1.67 B	
	Net Cash / Share:	**-2.93**	
	Share Price:	1	
	Enterprise Value / Share:	**3.93**	
	Total Market Cap:	1.67 B	
	Enterprise Value:	**6.57 B**	
	2011 Sales Growth:	2%	
	2011 Earnings Estimate:	-.37	
	Enterprise Value Multiple:	**N/A**	
	Dividend & Yield:	**N/A**	

Level 3 was one of the first companies to realize the full extent to which fiber optics running Internet Protocol networking technologies would truly change the world. And the company bet and bet big on that vision, raising and spending tens of billions of dollars in its first few years of existence and spanning the globe with glass tubes in plastic casings (ie, fiber optic cables).

The only problem is that the company spent much more money than they've ever been able to generate in sales, much less earnings and they still have to scramble to make the balance sheet balance every year.

2% sales growth as the company continues to lose revenues from the dial up business that people used to access the Internet back 15 years ago. That's embarrassing for a company in this space. Someday Level 3 might generate some serious returns for shareholders, but I'm afraid it'll have to come after a more serious recapitalization.

Revolution Investing rating: 3/10

Company:	**GLBC - Global Crossing, Ltd.**
Summary:	Global Crossing Ltd, provides telecommunication solutions over an integrated Global IP based network. The company offers a wide range of data, voice and security products to companies, carriers and service providers world wide.

Balance Sheet:	Cash and Cash Equivalents:	486 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	486 M
	Total Debt:	1.38 B
	Net Cash:	**-894 M**
	Outstanding Shares:	60 M
	Net Cash / Share:	**-14.9**
	Share Price:	13
	Enterprise Value / Share:	**27.9**
	Total Market Cap:	798 M
	Enterprise Value:	**1.7 B**
	2011 Sales Growth:	5.6%
	2011 Earnings Estimate:	-1.95
	Enterprise Value Multiple:	**N/A**
	Dividend & Yield:	**N/A**

GLBC provides global public and private backbone networks to provide solutions for Data Transport, Voice, and IP to 40% of the Fortune 500 and 700 telecom carriers, mobile operators, and internet service providers.

After a checkered past, the company is capitalizing on continued growth in network and bandwidth needs in a market where such demand has finally caught up and exceeded what was once an oversupply of fiber. The company's balance sheet is much better than it has been in year's past with less debt and a better net cash position, but it's still far from a safe, pretty play here.

And the 5% expected topline growth for this company is shameful, as the growth in demand for IP-based backbone is easily double the broader macroeconomy. And frankly, Global Crossing should be a market share taker in the sector too. But it's not.

Revolution Investing rating: 3/10

VIII. App retailers:

Company:	**RSH - Radioshack Corporation**	
Summary:	Radioshack Corporation is a retail seller of electronic goods and services.	
Balance Sheet:	Cash and Cash Equivalents:	908 M
	Short Term Investments:	--0
	Long term Investments:	--0
	Total Cash:	908 M
	Total Debt:	628 M
	Net Cash:	**280 M**
	Outstanding Shares:	113 M
	Net Cash / Share:	**2.48**
	Share Price:	19
	Enterprise Value / Share:	**16.5**
	Total Market Cap:	2.1 B
	Enterprise Value:	**1.82 B**
	2011 Sales Growth:	4.2%
	2011 Earnings Estimate:	2.16
	Enterprise Value Multiple:	**7.6 Times Forward Earnings**
	Dividend & Yield:	**.25 (1.3%)**

Radio Shack sells a lot of smartphones. And when Apple made the iPhone 4 available at Radio Shack from the first day of its launch, it helped establish this old-school tech retailer as getting to be cutting edge once again. And when the Windows 7 smartphone first hit the shelves, Radio Shack was there carrying three different versions from day 1.

Radio Shack missed the gaming console boom and selling speaker wires to college kids isn't exactly a high-margin, growth business. But by hitching its wagon to the smartphone future, Radio Shack's actually positioned itself for a new golden age as the smartphone buyers come to treat Radio Shack as a poor man's version of the Apple Store itself.

At only 7x forward earnings, the stock's obviously pretty cheap. But the company has struggled to grow cash flows the last few years and Wall Street's been burned by these guys many times over the years. I think I'd rather bet with Radio Shack and its smartphone movement than against them for the next few years though.

Revolution Investing rating: 6/10

Company:	**BBY - Best Buy Co., Inc.**	
Summary:	Best Buy Company acts as a retailer of consumer electronics, home office, entertainment software, appliances and related services.	
Balance Sheet:	Cash and Cash Equivalents:	1.8 B
	Short Term Investments:	90 M
	Long term Investments:	324 M
	Total Cash:	2.2 B
	Total Debt:	1.1 B
	Net Cash:	**1.1 B**
	Outstanding Shares:	398 M
	Net Cash / Share:	**2.76**
	Share Price:	43.5
	Enterprise Value / Share:	**40.7**
	Total Market Cap:	17.3 B
	Enterprise Value:	**16.2 B**
	2012 Sales Growth:	5.3%
	2012 Earnings Estimate:	3.95
	Enterprise Value Multiple:	**10 Times Forward Earnings**
	Dividend & Yield:	**.60 (1.4%)**

Remember Circuit City? Best Buy kicked Circuit City's butt so badly that the company couldn't even find itself a buyer out of bankruptcy and literally had to liquidate its holdings to pay back whatever it could. That left Best Buy with mainly just Radio Shack and Wal Mart to compete against in the bigger digital gadget retail wars. And just in time too, because Best Buy certainly isn't going to make a living selling CDs at a loss to get people into their stores any more, as once was a lucrative business.

No, now Best Buy focuses on getting you to spend as much as you can on as high a margin product as they can get away with placing on their shelves. And of course, they focus on smartphones. And like Radio Shack, by betting big on smartphone retail just as a hundred million new smartphone buyers come to market in the US over the next couple years. Best Buy will boom, and at just 10x next year's earnings and more than a billion in net cash on the balance sheet, this company's pretty cheap here too.

Revolution Investing rating: 6/10

Company:	**AMZN - Amazon.com, Inc.**	
Summary:	Amazon.com is a worldwide online retailer. The company serves its consumer customers through its retail Websites and focuses on selection, price, and convenience.	
Balance Sheet:	Cash and Cash Equivalents:	3.4 B
	Short Term Investments:	2.9 B
	Long term Investments:	--0
	Total Cash:	6.3 B
	Total Debt:	109 M
	Net Cash:	**6.2 B**
	Outstanding Shares:	448 M
	Net Cash / Share:	**13.84**
	Share Price:	165
	Enterprise Value / Share:	**151**
	Total Market Cap:	74 B
	Enterprise Value:	**67.8 B**
	2011 Sales Growth:	27.8%
	2011 Earnings Estimate:	3.47
	Enterprise Value Multiple:	**43 Times Forward Earnings**
	Dividend & Yield:	**N/A**

Amazon was one of the brashest bets capitalism has ever seen. The company literally started as a website retailer and has grown to become one of the largest technology companies in the world.

The stock has long traded from one extreme to the other and its one of the highest beta stocks you'll ever want to own.

But the fact is that the company's grown like few other companies ever. And just when you think the law of big numbers might start to impact their ability to keep such huge growth going, well, they blow away even the high bar they set for themselves.

All that said, we're talking about a market cap that is now more than half of Intel's own market cap. We're talking about a stock that's trading at 43x next year's earnings estimates. And while I respect the company's ability to grow earnings leverage tremendously whenever they do occasionally decide to try to generate profits for shareholders, I'm just leery about paying up so much for this company when there are cheaper stocks out there.

Revolution Investing rating: 6/10

Please check out Cody Willard's Revolution Investing newsletter at http://marketwatch.com/cody and http://AppConsumer.com for more.