

Next Generation of Business Software Focuses on Effectiveness Over Efficiency

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JOHN RIZZUTO is a Managing Director of software equity research at SunTrust Robinson Humphrey. Mr. Rizzuto has over 15 years of experience in the financial markets and specializes in the application, business intelligence and analytics, and data infrastructure software segments including those solutions being delivered “as a service” across the SaaS, PaaS and IaaS cloud markets. Mr. Rizzuto joined SunTrust Robinson Humphrey from Gartner, where he was the Lead Enterprise Software Analyst since 2007. In addition to his industry research, his responsibilities included coordinating with the Gartner software analyst community on the creation and publication of investment relevant research. Prior to joining Gartner, Mr. Rizzuto was the Director of the Enterprise Software Research team at Lazard Capital Markets, which followed his role as Global Head and Lead Software Analyst of the Credit Suisse Software Research Group. His sellside experience was preceded by five years in the investment community as a Software Industry Analyst and Portfolio Manager at a major technology-focused hedge fund. Mr. Rizzuto spent the first five years of his professional career working as a Computer Engineer in systems-level design and application development. He is a graduate of Stevens Institute of Technology with degrees in computer science and electrical engineering.

SECTOR — MULTIMEDIA SOFTWARE

(AGS807) TWST: Start with a broad view of your coverage.

Mr. Rizzuto: I cover enterprise software. That is software brought by enterprises; I primarily focus on applications, business intelligence and analytics, and data infrastructure. To really get an understanding of the big picture regarding software spending, it is helpful to understand that there are two primary drivers of technology investment: one, business-driven technology initiatives, and two, IT-driven technology initiatives. The way to recognize the difference is that business-driven initiatives are generally outwardly facing and are expected to impact the business directly, for example leveraging social networks to increase customer engagement and drive revenue, while IT-driven technology investments tend to be inwardly focused and center around improving processes and systems to increase efficiency and reduce costs.

Right now the pendulum has swung toward the business, and most IT groups are spending their time directly leveraging technology to drive business results. Today business executives are anxious to increase visibility and agility, meaning they want to have all the relevant information needed to make better decisions, and then they want to be able to implement those decisions very quickly and change direction quickly when the environment changes. These things are driven by information. Hence, companies are increasing their ability to drive insights by enabling more people within the organization to more effectively leverage

the massive data sets that are readily available via the cloud.

TWST: How would you characterize the environment you’re seeing for these companies?

Mr. Rizzuto: Within the software sector, the story is really the “have” and “have not,” so there is increasing bifurcation. The end markets are showing that in the vendors they are choosing, and it is also starting to show in the financial markets. Investors tend to see a bifurcation in the valuations they are willing to pay for a company. That is the investment environment we are seeing. We tend to see high valuations for companies that are directly leveraged to analytics, like **Tableau** (NYSE:DATA) or **Splunk** (NASDAQ:SPLK), growing many times the overall software market, and of course this is less so in larger companies such as **Oracle** (NYSE:ORCL), whose growth is only modestly higher than the market.

And as we mentioned earlier, from the end market perspective, business initiatives are driving IT spending and software investment. Initiatives focused on increasing visibility and agility for the business are influencing IT investment at a greater level than they’ve ever influenced them before, and the trend is very consistent with where the technology companies are investing their resources as well.

In our view there is a major shift in the market where we are moving from technology as primary enabler of business in efficiencies to leveraging technology as primary enabler of business effectiveness. This is a very critical change, because this is a 30-year shift, and it is happening right now. Historically technology

was leveraged to make companies more efficient: write notes faster, write reports faster, get information faster, cut down on headcount, automate manual processes, eliminate paper, etc. These things made business more efficient. Software focused on business effectiveness, it isn't just writing the reports faster; software can now be about finding the insights that drive the content of the reports.

As an example, think back over a hundred years ago. In those times if you want to send a message to California, it would have taken six months to get there, delivered via a chartered stagecoach on a journey from NY to SF. Later the Pony Express was able to cut the time in half, and that was revolutionary. If you fast-forward to today, you could send an instant message, and it could arrive in SF near the speed of light. That's efficient.

However, what doesn't change in this scenario is the value, and the value is always what's the message itself, and while technology made it so we were able to deliver the message much, much faster, it has only a marginal impact of what we wanted to communicate in that message. That's changing; today technology is helping construct what is inside the message, and that's a major shift. Technology, through analytics, algorithms and data is finding trends and identifying relationships that we, as people, do not have the capacity to see, which of course means we are unable to act on these trends.

TWST: Is this part of the shift to use advanced data analytics for marketing and improved operational efficiencies?

Mr. Rizzuto: Absolutely. This is the business intelligence and analytic space, and beyond just finding trends, it's going toward predictive and prescriptive analytics, but we are really just on the cusp of starting to do that. In any case, this is all data-centric, and that is the world in which we live. Data is everywhere, and while we might think of it as economic data or some formalized set of metrics, data is also in our tweets on **Twitter** (NYSE:TWTR) and our posts on **Facebook** (NASDAQ:FB). Changing all this data into useful information, that is, information which is sufficient to make decisions, is the key. That is where these analytics application companies come into play and the software infrastructure companies are necessary to enable them to retrieve the required data for their algorithms to work on.

However, data today is very fragmented and it's all over the place, making almost by chance to stumble across the right piece of data, and then you might get able to get something insightful. What's needed is an effective way to gather data on a massive scale — think all the census data, **Facebook** posts and economic data available — then running your algorithms on it in order to glean something insightful. As humans we do not have the capacity to do this on our own, and that's

where we try we employ business intelligence, machine-learning and behavioral analytics, which enable us to spot trends and relationships in data that will change the way make business decisions.

TWST: Which companies currently lead with new technologies and solutions that are supporting, or enabling the shift from, what you said was from effectiveness to efficiencies?

Mr. Rizzuto: Companies we like here are **Qlik Tech** (NASDAQ:QLIK), **MicroStrategy** (NASDAQ:MSTR) and **Tableau**. They are at the forefront of providing the early solutions to help us spot trends, but this is a long transition. These transitions come along every 30 years. They are putting in place the ability to get people like you and me to see things, and to visualize things that we haven't been able to see before.

TWST: Please give a closer look at how these solutions improve decision-making efficiencies and visualization capabilities.

Mr. Rizzuto: Up to now we've used rule-based programs to spot trends in data. But now we're able to see relationships across what are seemingly isolated and independent datasets that we couldn't see before. These companies provide solutions that enable this. In other words, the systems these companies sell can leverage, for instance, weather and location data, demographic and census data, and even our personal relationship data — what we might be tweeting or posting on **Facebook** — all in an effort to more effectively profile us.

These data sets center on a specific individual, and the software is able to provide a multidimensional view of that person. This is because we are able to obtain a more holistic view across these related data sets. It is next generation from what **Google** has been doing for years, tracking our search history and browsing habits in order to create a more personalized experience for individual user or, more aptly, provide information to enable enterprise to more effectively engage with customers. It is

not surprising that digital marketing is one of the early applications of the technology. Enterprises are far better equipped to personalize our individual experiences with their goods and services than ever before, and they are hoping to leverage that to drive revenue.

TWST: At what point does this cross the line to privacy invasion? Are there any regulatory guidelines for this kind of application?

Mr. Rizzuto: Privacy, that's the hot button, and as far as regulations, we are still in the early days. Theoretically we can browse the Internet and use the apps on our smartphone anonymously. However, we will quickly run into many inconveniences, and many of the services we have come to rely upon like free Internet e-mail, cloud storage and search require a degree of us sharing our personal information. Sharing and leveraging that information is how the

Highlights

John Rizzuto covers enterprise software. Mr. Rizzuto says there are two primary drivers of technology investment: business-driven technology initiatives and IT-driven technology initiatives, and right now the pendulum has swung toward the business. He says there is a major shift in the market with the move from technology as a primary enabler of business in efficiencies to leveraging technology as a primary enabler of business effectiveness.

Companies discussed: Tableau Software (NYSE:DATA); Splunk (NASDAQ:SPLK); Oracle Corporation (NYSE:ORCL); Twitter (NYSE:TWTR); Facebook (NASDAQ:FB); Qlik Technologies (NASDAQ:QLIK); MicroStrategy (NASDAQ:MSTR); CVS Health Corp (NYSE:CVS); International Business Machines Corp. (NYSE:IBM); Microsoft Corporation (NASDAQ:MSFT); SAP SE (ADR) (NYSE:SAP); VMware (NYSE:VMW); Citrix Systems (NASDAQ:CTXS) and EMC Corporation (NYSE:EMC).

providers of these services pay the bills.

Of course data security, a little different than privacy, remains the number one inhibitor to adopting new technologies — privacy and confidentiality and the emerging regulations around it. In addition, there are many aspects of data governance that concern organizations. All this introduces a new set of challenges. I think one of the things that we clearly understand is that we had closed networks before, and we were able to physically separate our private digital information from public access by not allowing our private networks to connect to the Internet; that is no longer feasible.

Also, we had varying degrees of business intelligence, and we had rule-based systems that always gave us information. We've been getting your coupons from CVS (NYSE:CVS) and others for years. CVS, like many organizations, is leveraging the information we have provided it when we signed up for its loyalty program along with the information created with each transaction where we swipe our loyalty card.

But now what's different going forward is that companies are going to have to rely and use data which it doesn't own, which it doesn't control, and which isn't within the four walls of its data center. This new data now has to be commingled with organizations' private data to optimize results. Since there is a lot more data in the cloud than in our data centers, increasingly we will move the data from our data centers to the cloud. Then this sensitive data is out in the cloud, but that's deceptive as well; even if its in our data centers we need to connect to the Internet, and that can create vulnerabilities. We seemingly read about data breaches on a daily basis.

TWST: What are some companies with offerings on the leading edge of this transformation into "live" data analytics? Are they mostly small caps at this point? Are there large caps innovating the space?

Mr. Rizzuto: In the large-cap world, Oracle is playing in this space aggressively, but every major vendor has a strategy to capitalize on the opportunity. Other participants include the likes of IBM (NYSE:IBM), Microsoft (NASDAQ:MSFT) and SAP (NYSE:SAP). Also, for those companies not playing directly in analytics, they will try to capitalize on the infrastructure. This is where companies like VMware (NYSE:VMW) and Citrix (NASDAQ:CTXS), among others, enter the conversation.

It is important to note that everything starts from the infrastructure that enables it. We need an infrastructure to move and store the data, and an infrastructure to host the applications. Oracle too has infrastructure solutions in addition to applications; this is increasingly common among the mega-vendors. Smaller companies are very focused on a specific, often more narrow segment, and they are leveraging newer technologies and they are typically very agile companies. Very often we see these smaller companies providing critical enabling technologies or applications.

TWST: Do companies like QlikTech, Tableau and Oracle all serve the same end markets?

Mr. Rizzuto: Oracle of course is very broad and one of the mega-vendors. However, it does compete in the business intelligence market, and that is the core market where Qlik and Tableau play. The top 10 software vendors control a massive amount of the market and play across many segments of the software industry, so they can't be ignored. VMware is worth mentioning; it is putting a stake in the ground and trying to be at the forefront of emerging data center and cloud infrastructure technologies.

Microsoft has made a strong and early move to the cloud as well. However, from our coverage universe, Oracle is the only mega-vendor we follow and a top pick of ours.

TWST: What are the most important factors you consider in your investment thesis for companies on your "buy" list?

Mr. Rizzuto: The first thing that sets the stage for our investment thesis is whether or not a company has gotten the technology right. It's critical. We are going through a once-in-a-generation transition driven by a fundamental change in the technologies available, which is a shift from the technologies prevalent during the client server/distributed era of the last 35 years. This pressures the mature software companies to retool and re-equip themselves to compete, while the newer ones need to leverage the newest technologies that are enabling the cloud era.

So the first thing that we look at is the architecture which companies are delivering that underlie their solutions. Then, in the case of the larger vendors, we need to evaluate whether or not they're going to be able to transition their customers currently utilizing their old architectures to their new technologies and architectures. This is inherently risky, getting people to abandon their old solutions while at the same time adopting their new solutions.

"One of the things that we clearly understand is that we had closed networks before, and we were able to physically separate our private digital information from public access by not allowing our private networks to connect to the Internet; that is no longer feasible."

1-Year Daily Chart of Oracle Corporation

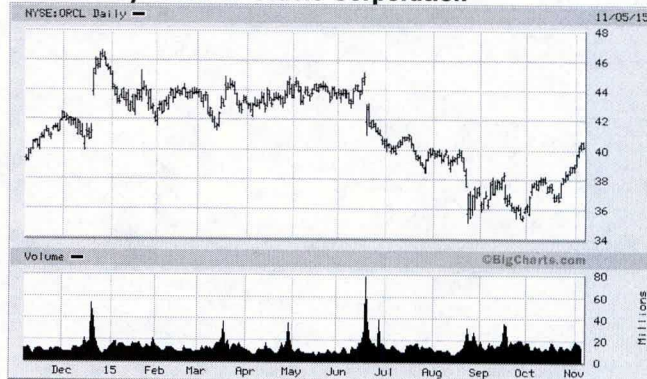


Chart provided by www.BigCharts.com

Microsoft is a good example of a company trying to get customers to shift from Office on premises to Office 365.

Of course during that transition it opens the door to competing, cloud-based spreadsheet and word-processing programs. Based on this evaluation we can begin to forecast market shares for vendors, and then evaluate the size and potential market share of adjacent and synergistic markets they are poised to enter. In this respect it's a top-down investment framework.

TWST: What are the risks or headwinds that these companies could face going forward? What are CEOs most worried about?

Mr. Rizzuto: The CEOs are most worried about getting disrupted. The CEOs of the big software vendors are most worried about changing quickly enough to embrace the next generation of technology before their customers embrace alternative suppliers. The smaller-company CEOs are most worried about not being able to expand their opportunities fast enough, and they know they are in a race to obtain critical mass in their respective markets.

TWST: Where is the outlook looking growing brighter? Where are you guiding higher or seeing any turnaround stories?

Mr. Rizzuto: Oracle and MicroStrategy. MicroStrategy is probably the best turnaround story, but Oracle is one of the companies that we just upgraded and that we like going forward as it transitions to the cloud. As Oracle moves toward the cloud, many investors are viewing it as a threat. We believe that at some point within the next 12 months, people will start to realize it's not a threat at all, but an opportunity. It is because we expect Oracle to manage the transition very well.

TWST: What is the level of M&A that you're seeing? And what does that reflect about the trends and themes surrounding the sector?

Mr. Rizzuto: Well when you see a deal like EMC (NYSE:EMC) and Dell go through, and prior to that you saw Dell get taken private and also companies like Compuware and BMC Software, I think one thing becomes pretty clear: If you're playing in one of these legacy environments, what dominated for the last 30 years, those markets are no longer large enough nor are they going to grow fast enough that all these mega-vendors can earn their cost of capital. So the only way that makes sense is there's some that go away, and a lot of them are going to team up through mergers and acquisitions, and create cost synergies as a way to drive wealth creation rather than through market growth. Of course, longer term

these companies are also retooling to compete more effectively. So that's one of the things you're seeing in the big-cap side.

On the other side of that coin are these companies that are building components of the next-generation architecture; people who want to get involved are going to continue to come in and take out these smaller companies to build out a component of their overall portfolio. So M&A will continue to be out there. That's not going to abate any time soon. Around 15 to 20 years ago, the "buy" versus "build" decision was debated, not so much anymore. Buying the right company with the right technology is nearly always the prevalent strategy.

TWST: Are there other possible catalysts or trends below the horizon that investors should be keeping an eye on?

Mr. Rizzuto: Yes, I think behavioral analytics and machine learning are two things that aren't investible today but are going to be investible in the not too distant future. We see companies starting to buy. We talked about the acquisitions. And we're seeing bigger companies starting to buy these small startups that are specialists around machine learning, specialists around behavioral analytics, which are next-generation type of technologies. So those are key trends and key developments to keep an eye on.

TWST: Overall, do you recommend this as a good time to get into the space?

Mr. Rizzuto: Well I think it's a good time to get in because we've got great companies that are positioned well. This is not a market play, because there are clear winners and losers. So I think it's a good time, but you have to be more selective than you've had to be historically. So in general, yes, it's an exciting time. It's a very exciting time, but this could be a very painful time if you're backing the wrong horse.

TWST: Thank you. (VSB)

Note: Comments and recommendations are as of 10/15/15.

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