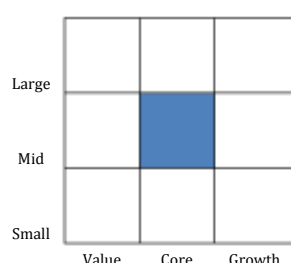


### Investment Style



Sources: Morningstar

### Firm Profile

Closing Price 2/20/17	82.60
52-Week Range	60.03 – 82.73
Average Daily Volume(M)	1.87
Shares Outstanding(M)	177.33M
Market Cap (USD)(B)	13.95
Beta	1.32
P/E (ttm)	60.00
P/B (mrq)	11.08
EV/EBITDA (ttm)	33.81
ROE	18.50%

Sources: FinViz

### Valuation

		Weight	Margin of Safety
DCF	80.25	30%	(2.9)%
Historical	94.06	40%	33.6%
Comparable	110.38	30%	13.9%
Intrinsic Value	94.79		

Sources: Team estimates

## RHT: Highlights

Red Hat is a Linux based American company that provides open- source software products to the enterprise community. With a calculated intrinsic value of **\$84.20** per share and a margin of safety of **8.3 %** leads me to believe there is much potential upside to Red Hat as they start to create strong positions in other markets. I recommend a **BUY** on Red Hat.

- ✓ **Larger contract, Renewable revenue, and cross selling**  
Red Hat this last quarter three especially has seen over 20% growth in deals over \$1M year over year with the top 30 deals of Q3 being over \$2m. Red Hat has also had strong cross selling success with 60% of top deals including app-dev/emerging technology offerings. Lastly with Red Hat making bigger deals the time frame of contract commitments have naturally become longer.
- ✓ **Red Hat's certifications, standardizations, and education**  
Red Hat's open source code has existed for a long time and has become a standard in the software and hardware industry. Servers and software today are both being built with compatibility with Red Hat as a bench mark. Industry professionals also can now study, test and be certified with Red Hat and Red Hat system engineers, insuring product consistency from operator to machine.
- ✓ **Red Hat's unique product and positioning**  
Red Hat is the only company today that offers Linux enterprise operating systems with support. Never before have companies had the choice to switch their computers and servers to a well-known, support backed, Linux system.
- ✓ **Growth and development through acquisitions**  
Between 1999 and 2016 Red Hat has made a total of 30 acquisitions. With these acquisitions Red Hat has been able to find and create some of their best products such as JBoss Middleware from their acquisitions. With these acquisitions they are also able to add their competition to their own workforce with the CentOS acquisition, allowing them to dominate the enterprise Linux market.

### 52 Week Price Movement



## Business Description

**Red Hat (RHT)** is an American open source software development company providing software products to the enterprise community Red Hat creates, maintains, and contributes to many free software projects. It has acquired several proprietary software product codebases through corporate mergers and acquisitions and has released such software under open source licenses. Red Hat also offers infrastructure related solutions, such as Red Hat Enterprise Linux, an operating system platform that runs on hardware for use in physical, virtual, container, and cloud environments.

### Business Segments

Red Hat has two segments **for all their products and they are** Technologies and their Services & Support.

Red Hat's foundational revenue stream is in its gaming-oriented PC GPU products.

### Technologies:

- Red Hat's technologies segment houses many different product lines that are built for many different industries, topics, as well as some of their other developing technologies. Their product lines consist of Linux platforms, JBoss Middleware, Virtualization, Cloud computing, Storage, Mobile, and Management. All of these products are perfectly poised to handle most if not all technical operations needed in a company. Everything from their DevOps products aimed towards IT professionals to their Linux systems to be integrated into Healthcare and financial environments.

### Support and Services.

- Red Hat's Services and supports segment is divided up into four different sub-segments. **Support, training, certification, and consulting.** One part of Red Hat that is quite unique is the fact that they offer certifications and training. These training and certification course offer a step of standardization in the world as system administrators. Red Hat offers a wide variety of certifications however their post popular, (and sought after), is their Red Hat certified System Administrator certification. Even though these segments offer less as far as revenue goes, they still hold great implicit value. Simply by offering these courses, certifications, consulting and support Red Hat can actively insure product consistency through implementation.

### Strategy

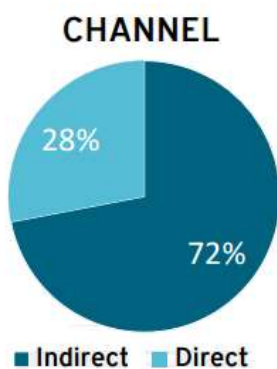
RHT has some clear strategic goals for the future, that will aid or allow them to keep their strategic advantage over their competitors:

### Development of new products as well as expansion on current products

Red Hat hopes to create and mainstream more of products to access a wider range of customer as well as diversifying their revenue stream. Such products they are currently developing and promoting are their Hybrid Cloud platform, and Dev ops. These products are apart of their business growth drivers to expand market potential by identifying promising new technologies.

### Cross selling and Contract Renewals.

One very large and important source of revenue for Red Hat is their renewal of their current contracts and their ability to cross sell while negotiating contracts. Red Hat strives to get longer and larger contracts as they have this Q3 with their top 30 deals being over 2m. Red Hat can then refocus their sales team away from contracts (as contract durations increase), to acquiring new customers or sales on new Red Hat products.



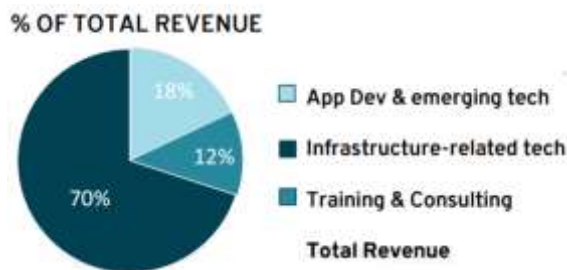
### Growth through acquisitions:

Even though it is their least talked about strategy for growth this strategy of growth through acquisition is hard to ignore considering the amount of acquisitions RHT have already made. Red Hat has acquired several proprietary software product codebases through corporate mergers and acquisitions and has released such software under open source licenses. Red Hat believes that the continued expansion and research for new better and more efficient products can be efficiently achieved through acquiring others. Specifically companies that have dedicated research or software products such as JBoss. and CentOS.

## Industry Overview

As Red Hat's products are applicable to many industries their main focuses are **Financial services, Government and Public sector, Healthcare and Life Sciences, and Telecommunications.**

Red Hat, Inc. provides open source software solutions to develop and offer operating system, virtualization, management, middleware, cloud, mobile, and storage technologies to various enterprises worldwide. It offers infrastructure-related solutions, such as Red Hat Enterprise Linux, an operating system platform that runs on hardware for use in physical, virtual, container, and cloud environments. Below are most of Red Hats approach to the variety of the specialized markets.



### Financial Services

The trading industry is experiencing unprecedented growth in trade volumes and shrinking trade size. Red Hat Enterprise Linux offers solutions to handle this volatility. Trading exchanges also must be built to handle huge amounts of data and complex transactions. The financial services industry is constantly seeking ways to lower costs and respond to new global competitors and global government regulations. Red Hat's value to financial markets by having Wall Street's IT professionals hired to help shape commercial open source products and Red Hat as a company.

### Government and Public Sector

With shrinking budgets, but more pressure to deliver more Red Hat focuses on shared services, increased security and preparedness for emergency situations with their government marketed products. Red Hat's Government and Public Sector products are all certified. Their open source technologies are being used throughout the federal government, from processing Medicare claims at the CMS to handling airplane traffic at the FAA to enhancing every tactical vehicle in the DOD, and in all 50 states

### Telecommunications

Red Hat delivers a complete, open software foundation for communications service providers (CSPs). Red Hat achieves this by working with industry leading partners and trusted open source communities to bring innovative solutions. Red Hat does this by creating developments in network function virtualization, cloud migration, and software defined storage for the telecommunications industry.

## Healthcare and Life Sciences

With the evolving healthcare landscape organizations must comply with changes associated with the Affordable Care Act and new regulations, connect to the wider healthcare community, overhaul inefficient business models, and cut costs all while delivering safe, quality patient care. Many top healthcare companies rely on Red Hat to protect their sensitive data using our solid security features and highly available solutions. Red Hat Enterprise Linux is the leading open source operating system which lays a stable foundation that supports changing requirements and secures protected health information.

## Competitive Positioning

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### Competitive Advantage

Red Hat holds many competitive advantages the main one being that they taking Linux to the everyday business world where there was always nervousness with integrating power and open source operating systems.

This nervousness attributed to Linux systems mainly comes from their high learning curve and the fact that most privately handled, and updated. These variables alongside the many distributions of Linux can create problems for any integration of Linux operating systems in large environments.

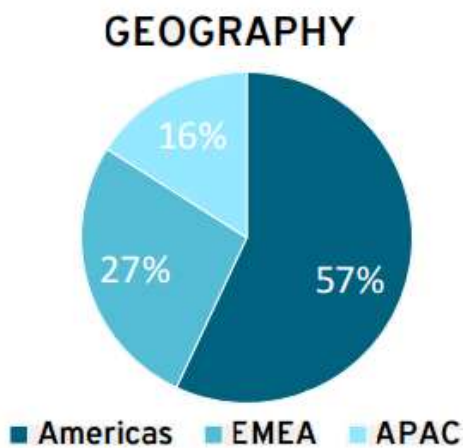
Red Hat addresses these issues with their standardization through certifications, regular updates, and customer support. Red Hat filled the need for a solid company backing Linux alternatives and has had the single biggest impact on Linux for the corporate masses, as Red Hat was able to provide support solutions alongside their own branded version of the operating system. Red Hat has also worked very hard in maintaining the support and trust of their original customer base, by keeping true to their free open source code.

Their success and support from the Linux community has allowed Red Hat to build up a huge amount of momentum and recognizability. Which has allowed them to stand out from any other similar companies such as Novell and become the industry standard for Linux operating systems and products.

Servers and software today are both being built with compatibility with Red Hat as a bench mark. Industry professionals also can now study, test and be certified with Red Hat and Red Hat system engineers, insuring product consistency from operator to machine. Never before have companies had the choice to switch their computers and servers to a well-known, support backed, Linux system.

As for products, Red Hat's JBoss Enterprise Application Platform (JBoss EAP) is the market-leading choice to deliver enterprise-grade security, performance, and scalability. JBoss is able to run in any environment on site, virtual, private, public, or hybrid cloud. JBoss EAP gives you a single platform to quickly develop and deploy applications serving a wide range of requirements spanning traditional to new web-scale, micro service applications.

JBoss EAP with common DevOps tools, you maximize development and operations teams' productivity, decrease quality issues, and get new apps out to market fast.



With that being said the operating system market is quite intimidating with Microsoft, Apple, and other Linux distributions. However as long as Red Hat does their diligences and continues to support their powerful and dynamic operating system they should continue to hold their competitive advantage against other enterprise software management systems.



## SWOT Analysis

Red Hat is a well-known player in the computing industry with its products across a variety of

### Strengths

- Association with leading independent software and hardware vendors
- Consistent revenue growth with contracts and their subscription model
- Strong customer base
- Hybrid cloud software services for public and private data / application exchanges

### Weaknesses

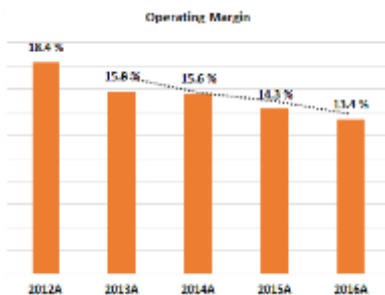
- Dependent on negotiations and contract closing
- Low market share

### Opportunities

- Increasing demand for open source software
- Strategic acquisitions
- Increase in demand the Cloud Computing market

### Threats

- Intense competition from many other competitors
- Economic slowdown and fluctuations
- Product defects and bugs
- Fluctuation of foreign currency exchange rates.



## Porter's Five Forces

Five Forces analysis evaluates the five factors that determine industry competition.

### Rivalry Amongst Sellers | Mildly Attractive

There are two classes of competitors to Red Hat. First is the monolithic Microsoft which controls or is a leader in most OS markets. Second are the numerous other Linux distribution organizations. Although competitors, a Davids-vs-Goliath mentality is shared by many Linux organizations; there is a general environment of cooperative competition among Linux distributors. Linux distributors recognize that their biggest challenge is not each other but the total Linux market size – which, outside of the server niche, is very small and ripe for growth.

### Threat of Substitutes | Unattractive

With 13 major distros and over 305 distros total, there is a large threat of substitution to Red Hat's distro. What is much more difficult to substitute are the services Red Hat offers. There are many very small organizations which provide Linux-focused services but few large ones and, none as successful as Red Hat.

### Power of the Suppliers | Very Attractive

Red Hat has essentially no suppliers. They take (and develop) a raw material (Linux) and

### Threat of New Entrants | **Unattractive**

The operating system market is both monolithic and fragmented at the same time. Monolithic due to the monopoly Microsoft holds on the desktop market which helps to extend its power to other markets such as the server and handheld market. Fragmented because, outside of the desktop market, Microsoft is often the largest or second largest player but does not hold monopoly power. As a result of these dynamics, there are very high (some would say insurmountable) barriers to entry in the desktop OS market but much lower barriers to entry in other markets and, for a Linux distribution, the barriers to entry are very low.

### Power of the Buyers | **Attractive**

By differentiating themselves through marketing, quality and service, Red Hat has successfully differentiated themselves from competitors. The perception that they offer a superior product gains them power when bargaining with buyers of their product. But, due to the nature of open source, Red Hat must maintain this image to retain their price premiums in this competitive market.

### Competitors

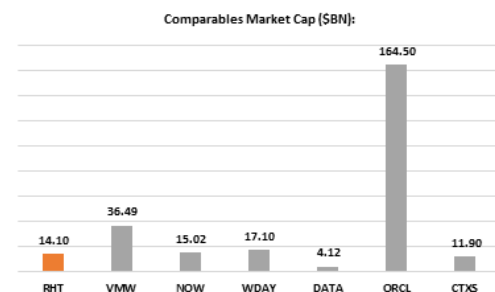
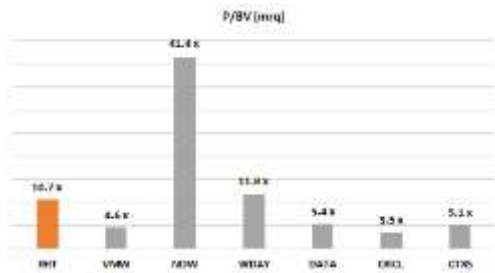
There are many competitors in the industry however there is only a very small handful of competitors that directly compete with Red Hat. There also are large amounts of the competition that are hard to find, and are still not publically available for trading. However with Red Hat's branding, first movers advantage, and innovation is hard to find competitors are even close to what Red Hat exactly does.

#### **VMware, Inc. (VMW)**

VMware, Inc. is a subsidiary of Dell Technologies that provides cloud and virtualization software and services. VMware's desktop software runs on Microsoft Windows, Linux, and Mac OS X their other products VMware ESX and ESXi can run off of the servers hardware directly. Oracle's initial public offering was in 2007 and has made large revenue increases with their virtualization software. VMware reported revenue of 7,093 million in 2016 indicating 6.71% year-over-year growth and is based in Palo Alto, California. VMware has a market cap of 34.49B

#### **ServiceNow, Inc. (NOW)**

ServiceNow, Inc. is a cloud computing company that offers Platform-as-a-service (PaaS) enterprise software. Their management software is specialized for human resources, law, facilities management, finance, marketing, and field operations. ServiceNow's initial public offering was in 2012 and has integrated their products with such platforms as Salesforce, JIRA, SharePoint, and BMC Remedy Action Request System. ServiceNow reported revenue of 1,391 million in 2016 indicating 38.29% year-over-year growth and is based in Santa Clara, California. ServiceNow has a market cap of 15.02B.



vmware

servicenow





#### ***Workday, Inc. (WDAY)***

Workday, Inc. is an on-demand (cloud-based) financial management and human capital management software vendor. Workday offers many similar services to Oracle and in fact actually aims itself at customers who are against Oracle. Workday's initial public offering was in 2012 and has made large revenue increases with their on demand cloud based financial tools and their 7 acquisitions that they have made since they have incorporated. Workday reported revenue of 1,162 million in 2016 indicating 47.53% year-over-year growth and is based in Pleasanton, California. Workday has a market cap of 17.16B



#### **Tableau Software (DATA)**

Tableau Software Company is a fairly new company that produces interactive data visualization products focused on business intelligence. Tableau initially began to commercialize research which had been conducted at Stanford University's Department of Computer Science and later used its techniques for exploring and analyzing relational databases and data cubes. Tableau initial public offering was in 2013 and has made large revenue increases with data visualization products, custom geocoding, and five ways to access their products: Desktop, Server, Online, Reader, and Public. Tableau Software reported revenue of .83 million in 2016 indicating 26.52% year-over-year growth and was founded and is based in Seattle, Washington. Tableau Software has a market cap of 4.12B.



#### ***Oracle Corporation (ORCL)***

Oracle Corporation is an American multinational computer technology corporation, and specializes in marketing database technology, cloud engineered systems, and enterprise software products. Oracle's initial public offering was in 1986 and their software database/middleware products and services making up the most of their revenue. Oracle reported revenue of 37,047 million in 2016 indicating a surprising -3.08% year-over-year revenue shrink, being the second fiscal year in a row to record annual revenue losses. Oracle was founded in Santa Clara, California but is currently based in Redwood Shores, California. Oracle Corporation has a market cap of 164.18B.



#### **Citrix Systems, Inc. (CTXS)**

Citrix is an American multinational software company that provides server, networking, Cloud, applications and desktop virtualization products. Citrix's initial public offering was in 1995 and has made large revenue increases with their remote access products and remote desktop products (e.g. being able to access Photoshop, and more, on a machine that does not have it through Citrix's portal). Citrix reported revenue of 3,418 million in 2016 indicating 4.8% year-over-year growth and was founded in Richardson, Texas. Citrix systems have a market cap of 12.12B.

### **Financial Analysis**

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#### **Robust Growth in Revenue and Revenue diversification**

Again despite Red Hat's diversification their foundational revenue stream is in its Infrastructure related technology products taking up around 71% of their total revenue. However due to cross selling this relative revenue segment has been declining as Red Hat has expanded into their other product areas. These other segmentations being App dev & emerging technology which is 17% of total revenue and training services making up 12% of their total revenue.

#### **Solid Net Income as well as Revenue**

Over the last 5 years, Red Hat has reported positive revenue and net income. Both of these metrics have seen substantial growth as costs have been reduced and profit margins have improved. Since 2012 both the total assets and total capital available has almost doubled to \$4,155 million from \$2,491 million respectively. Red Hat has also seen substantial improvements in its ROA, ROC, and ROE.



It is estimated that in FY2017, Red Hat will see at least a 17% increase in revenue from FY2016, net income increase of 32.3%, and an EPS of \$1.44 (32.1% increase).

### Generating Cash Flow

Red Hat has been able to generate cash flow with their increasing duration of contracts, subscription renewals, and newer and larger contracts. This has allowed them to increase their cash flow while maintaining relatively the same margins.

## Corporate Governance

The Board of Directors of Red Hat Corporation sets high standards for the Company's employees, officers and directors and understand the importance of sound corporate governance. Red Hat has nine directors on their board and three board committees Audit, Compensation, and nominating & governance.

### Ethics

Red Hat believes in integrity with which they conduct their selves and their business. This is their key to their ability to run a successful, innovative business and maintain reputation. Red Hat expects their directors, executives and employees to conduct themselves with the highest degree of integrity, ethics and honesty

### ISS QuickScore

Red Hat's corporate governance practices are rated by external organizations such as Institutional Shareholder Services. A score of 1 indicates lower governance risk, whereas a score of 10 indicates higher governance risk. Red Hat's Corporation's overall Governance QuickScore was 6, based on the below scores:

- Audit: 2
- Board Structure: 2
- Compensation: 7
- Shareholder Rights: 4

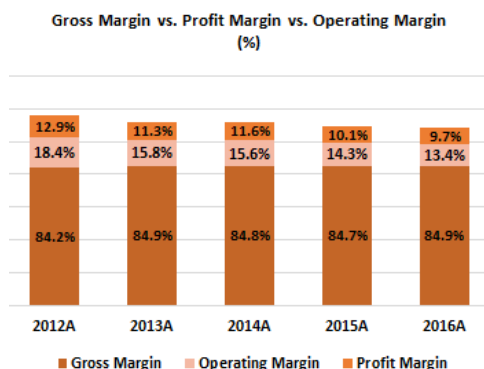
## Valuation

### Discounted Cash Flow

A discounted cash flow model projected over a 5-year period. Our model arrived at a value of **\$80.17** per common share of stock. It was done by forecasting revenues and all operating expenses before arriving at a forecasted net income. The forecasted income statement was then used with the projected changes in net working capital along with capital expenditures to arrive at a projected free cash flow. The cash flows were then discounted and used with the calculated terminal value with our calculated weighted average cost of capital to arrive at our value of equity. The equity value was adjusted with net debt to arrive at the **\$80.17** value per common share of stock. The current value of the RHT stock is \$82.60 and the DCF holds a 20% weight for my final evaluation.

### Revenue

Revenue growth was focused and based on both management guidance as well as historical trends. Red Hat's revenue growth in the past year can be attributed to their subscription renewals and their larger and larger contracts they are signing. These bigger contracts are manipulating the revenue in several ways. One issue this creates is with customers that think they can get a better deal on their contract if they negotiate the deal towards the end of the quarter, and secondly customers are prefer to pay these contracts more on a consumption type basis as their company models are used to. This however shouldn't be an issue as all customers are committed once they sign to the contract.





## Cost of Goods Sold

Cost of goods sold was projected from a percent of revenue. Cost of goods sold have remained relatively constant as a percent of revenue over the past five years and we projected these costs to slowly increase RHT continues to grow and develop their hybrid cloud projects and work with larger and larger contracts.

## Capital Expenditures

Capital expenditures was projected from a percent of revenue. To project the years after we reverted back to a historical average as a percentage of revenue. Since research and innovation is essential to Red Hat the projection of capital expenditures is mostly related to developments needed in their developing cloud services and other products.

## Terminal Growth

We use a terminal value of **3%**. Inflation is expected to grow at a rate around 1% annually and U.S. GDP to continue to grow between 2% and 3% for the foreseeable future.

## Historical Model

The other valuation model we used was a historical earnings model. A 3year and 5 year average was calculated with P/E ratios and used our expected FY17 EPS of \$1.44. Red Hats growth in the last year has noticeably affected my projected value per share.

However I feel this growth is justified as guidance raised their projections after their Q3 earnings call the historical model might hold the most accurate intrinsic value for Red Hat. The Historical model presented a value of **\$94.08** per common share. The comparable model has a weighting of 40% in the final evaluation.

## Comparable Model

The competitors selected for the comparable model are Citrix Systems, Inc. (CTXS), Oracle Corporation (ORCL), Tableau Software (DATA), Workday, Inc. (WDAY), ServiceNow, Inc. (NOW), and VMware, Inc. (VMW). Other comparable companies for Red Hat were not hard to find as the sector is quite crowded with competitors for what RHT specifically provides. However Red Hat has uniquely positioned it's self with its open source Linux software. This makes them very unique from their competitors even though they all push into each others market segments.. The Comparable model presented a value of **\$110.38** per common share which is high but not higher than some other analyst's estimates. One issue I had with the comparable that I trying to circumvent with my extra comparable sheet was the fact that 3 out of the 6 companies compared had negative P/E and EV/EBITDA. This is most likely because the companies with negative values are growing at very large rates that they are spending so much to maintain those growth rates and haven't reached critical mass yet. I tried to combat this with substituting their P/S value for their P/E and using EV/Sales instead on EV/EBITDA in the other model. The comparable model has a weighting of 30% in the final evaluation.

## Investment Summary

I recommend a strong BUY for Red Hat. They are the industry leader in Linux enterprise and are a fully open source software engineering company. They also have very consistent lines of revenue with contract commitments and contract renewals. Red Hat will also have many future opportunities for future cross selling because of contract renewals. Red Hat also seems very open to growth through acquisitions which is very efficient way to acquire new applications and to access a wider customer base. Red Hat's subscriptions, services, and software create long term drivers for revenue growth that they should easily be able to integrate into their short term catalysts. RedHat remains on track with full year guidance and raised earnings estimates for their fiscal 2017 year from their 2016 Q3 earning call.

With a calculated intrinsic value of \$94.79 per share, and a margin of safety of 28.4%, I would recommend a BUY on Red Hat.

Analyst Price Target Estimates

