

EDA - Corporate Governance and Company Performance

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```
setwd("/Users/Conor/Google Drive/MSc/dissertation/data/processed")
```

```
library(reshape)
library(stringr)
library(rpart)
library(lattice)
library(ggplot2)
```

S&P 500

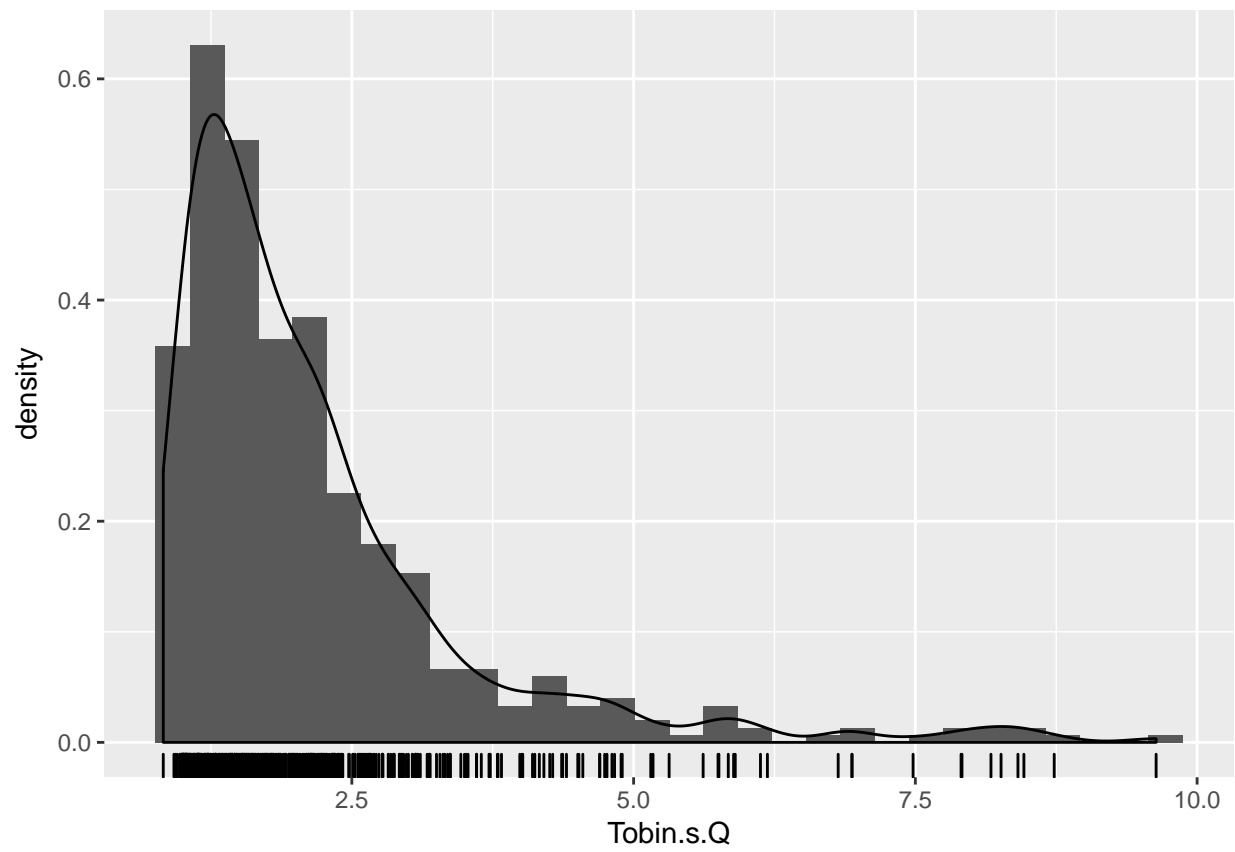
The S&P 500 is an American stock market index including market capitalizations of 500 companies, listed on the NYSE or the NASDAQ. It is distinct from other indexes such as the Dow Jones etc due to its diverse constituency and weighting methodology. *Would it be useful to look at other index's?*

Read in data as below.

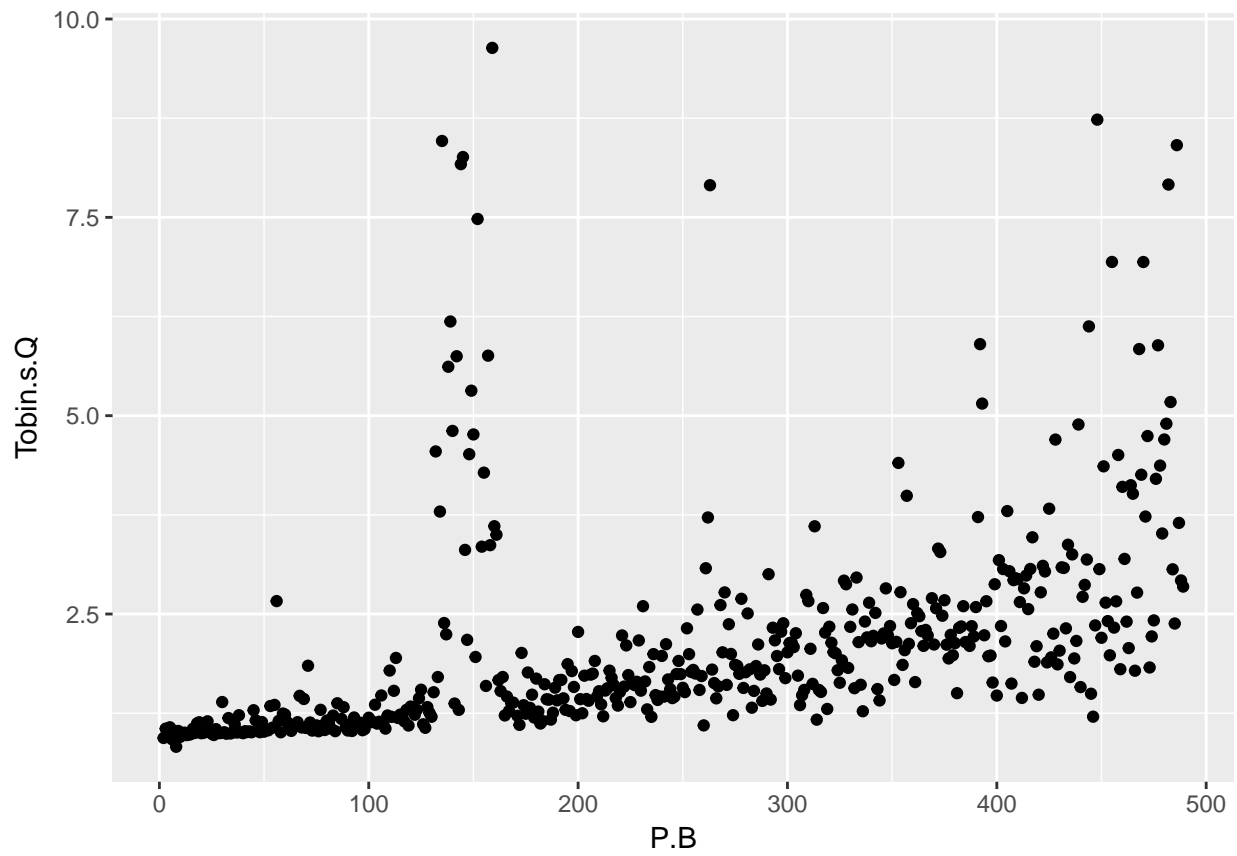
```
setwd("/Users/Conor/Google Drive/MSc/dissertation/data/processed")
spx=read.csv("spx.csv", sep=",", na.strings="#N/A N/A")
spx_EDA = spx[c("Ticker", "Tobin.s.Q", "P.E", "EPS", "P.B", "P.EBITDA",
               "Board.Size", "CEO.Duality", "X..Feml.Execs",
               "X..Feml.Execs.1", "Bd.Avg.Age", "Board.Mtg.Att..")]
spx_EDA[ spx_EDA == "#N/A Field Not Applicable" ] <- NA
```

```
spx_EDA$P.B=as.numeric(spx_EDA$P.B)
spx_EDA$P.E=as.numeric(spx_EDA$P.E)
spx_EDA$EPS=as.numeric(spx_EDA$EPS)
spx_EDA$P.EBITDA=as.numeric(spx_EDA$P.EBITDA)
spx_EDA$TickerID = str_split_fixed(spx_EDA$Ticker, " ", 2)[,1] #parse the ticker itself
```

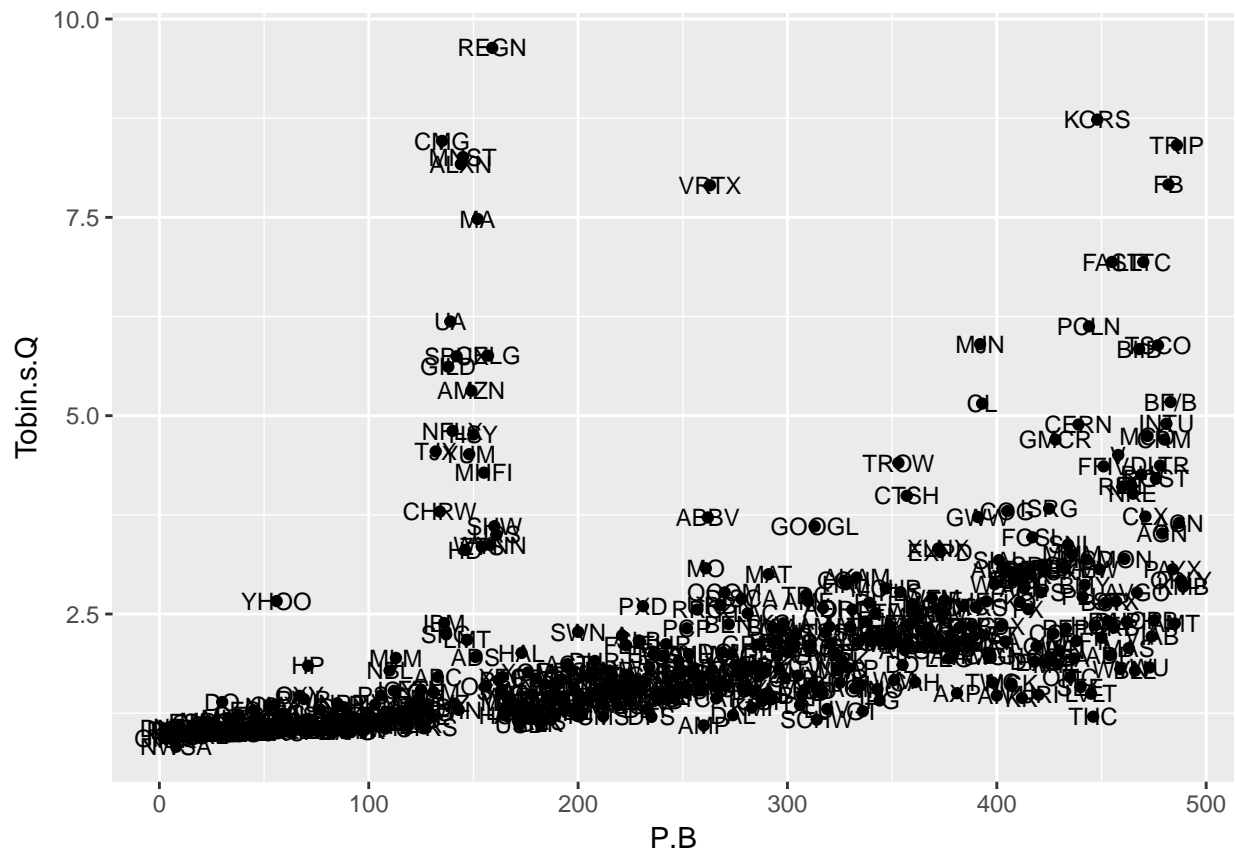
```
#distrib
ggplot(data=spx_EDA) +
  geom_histogram( aes(Tobin.s.Q, ..density..) ) +
  geom_density( aes(Tobin.s.Q, ..density..) ) +
  geom_rug( aes(Tobin.s.Q) )
```



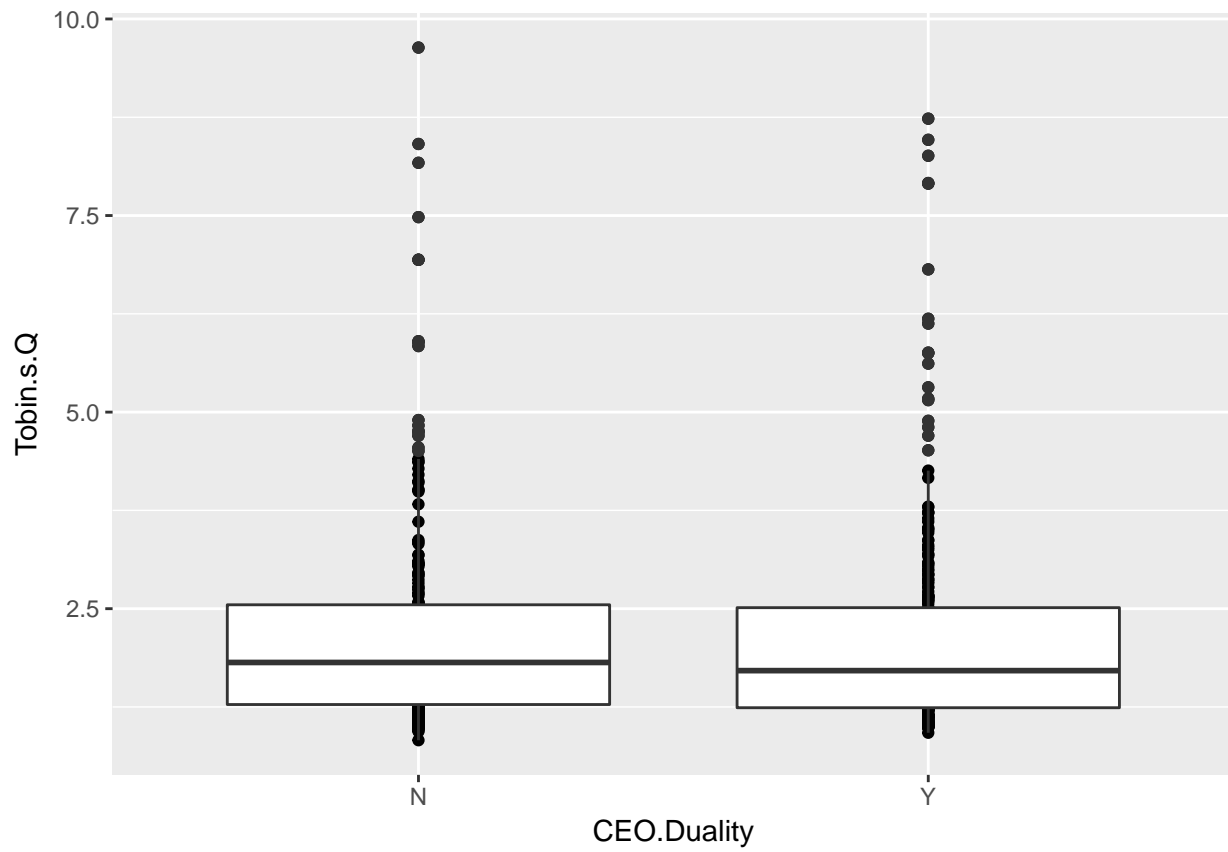
```
##P.B  
ggplot(spx_EDA, aes(P.B, Tobin.s.Q) ) +  
  geom_point()
```



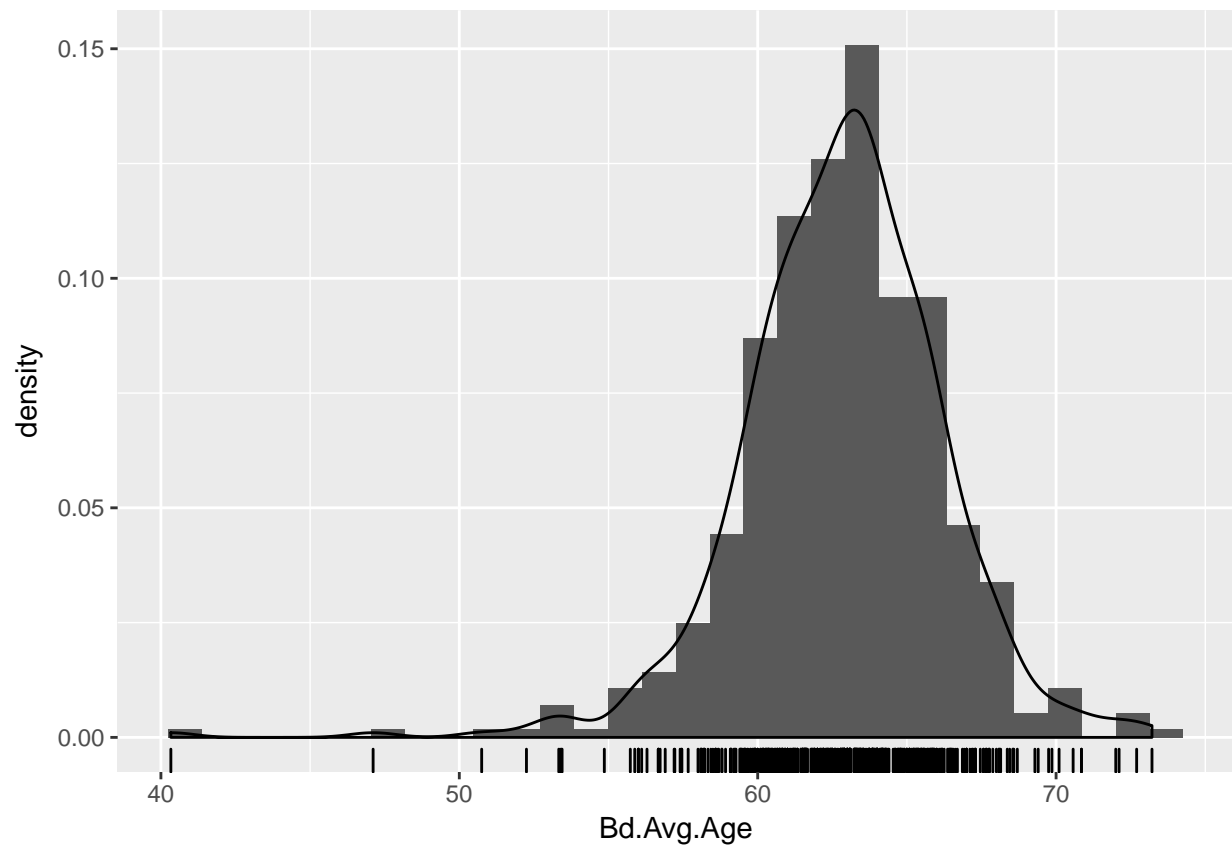
```
#with labels  
ggplot(spx_EDA, aes(P.B, Tobin.s.Q, label=TickerID) ) +  
  geom_point() +geom_text(size = 3)
```



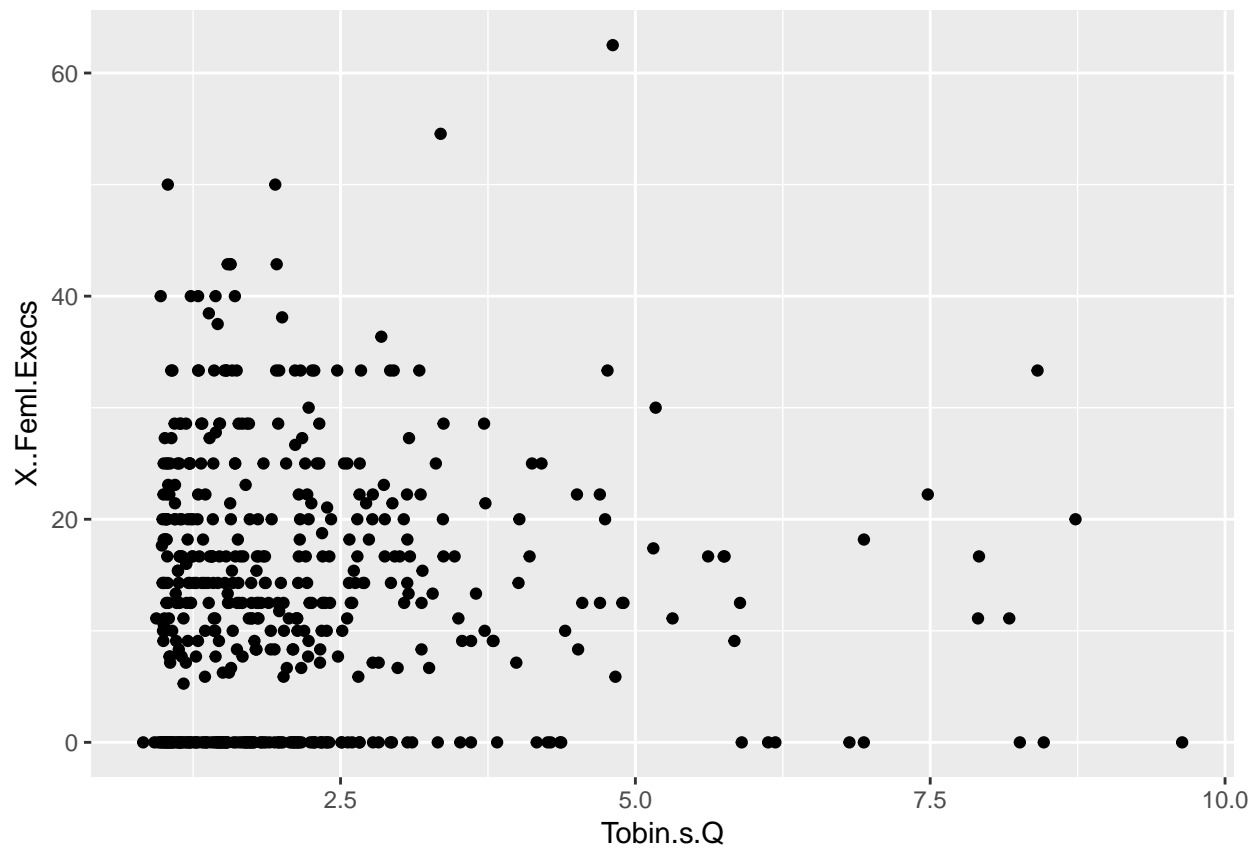
```
#no difference
ggplot(data=subset(spx_EDA, !is.na(CEO.Duality)),
  aes(CEO.Duality, Tobin.s.Q )) +
  geom_point() + geom_boxplot()
```



```
#board average age  
ggplot(data=spx_EDA) +  
  geom_histogram( aes(Bd.Avg.Age, ..density..) ) +  
  geom_density( aes(Bd.Avg.Age, ..density..) ) +  
  geom_rug( aes(Bd.Avg.Age) )
```



```
#female presence on board and success?  
ggplot(spx_EDA, aes(Tobin.s.Q, X..Feml.Execs) ) +  
  geom_point()
```



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