

# Appendices

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## 1 Appendices

### 1.1 Appendix A

Notes: This table includes summary statistics for main variables used in our research. Statistics include mean, standard deviation,, min, 1st quartile, median, 3rd quartile, max & number of valid data points. In Panel A, different YIV data is summarized. In Panel B, we have listed the main dependent variables which are used for predictions. GDP denotes the year-on-year growth rate(quarterly data), CON denotes YOY consumption growth(monthly data), EMP describes YOY growth rate for non-farm payroll and lastly IND stands for Industrial production YOY growth (monthly data). In Panel C, different control variables are listed: SVEN1F01 - 1 year treasury bond par yield.

Table 1.1: Summary Statistics

	Mean	Std.Dev	Min	Q1	Median	Q3	Max	N.Valid
<b>Panel A: YIV</b>								
YIV	3.34	1.31	1.39	2.60	3.00	3.62	9.21	103
<b>Panel B: Dependent Variables</b>								
GDP	2.50	1.78	-3.92	1.71	2.61	3.98	5.30	103
CON	4.88	1.95	-3.03	3.92	5.11	6.22	9.02	312
EMP	1.07	1.67	-5.00	0.20	1.60	2.20	3.50	312
IND	2.00	4.05	-15.33	1.19	2.74	4.16	8.54	312
<b>Panel C: Control Variables</b>								
SVEN1F01	3.89	2.40	0.21	1.38	4.35	5.88	9.29	6486
VIX	19.83	7.64	10.82	14.20	17.76	23.54	62.64	312
HOUSNG	1.01	18.36	-54.80	-7.25	2.80	12.70	50.00	312

*Note:*

Additional control variables will be added upon construction. Furthermore, currently the frequency of the datasets differs for different variables but this will be addressed in the research process.

## 1.2 Appendix B.

Notes: This table includes regression using GDP & YIV. Controls will be added during research process. The equation for the regression is the following:

$$\sum_{j=1}^{j=H} \log(1 + GDP_{i,t+j})/H = \alpha_H + \beta_H \sigma_{IV,t}^{INT} + Controls + \varepsilon_{t+H} \quad (1)$$

Table 1.2: Regression output

	H12	H18	H24	H30	H36
<b>Panel A: YIV</b>					
R-Squared	39.18	34.97	27.53	23.09	20.26
Adjusted	38.55	34.29	26.75	22.24	19.37
R2					
Intercept	5.02	4.71	4.33	4.08	3.92
Beta	-0.76	-0.66	-0.54	-0.47	-0.41
t-stat	-7.90	-7.15	-5.94	-5.23	-4.76
p-value	0	0	0	0	0
RMSFE	0.13	0.12	0.12	0.12	0.12
Significance	*	*	*	*	*

*Note:*

\*\*\* - p>0.01, \*\* - p>0.05, \* - p>0.1

### 1.3 Appendix C

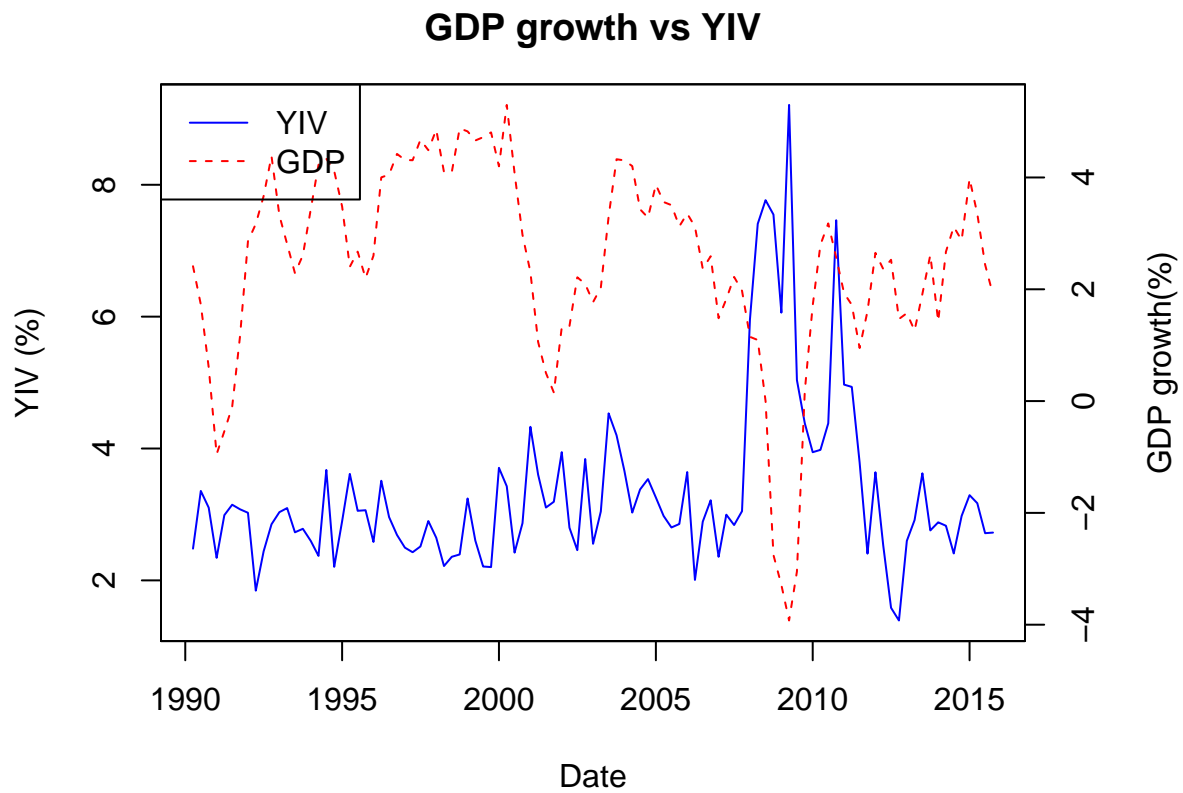


Figure 1.1: GDP Growth(%) vs 5-year Treasury Implied Volatility