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Growth ... What growth?

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ABSTRACT

This study focuses on economic turmoil in the UK between 06September and 19October2022 consequent on a “mini budget” announced by the then Chancellor. Contrary to pre-announcement growth expectations, UK firms lost about 0.30% in daily excess returns and £0.87 million in market value. UK’s “Moron Risk Premium” increased by 0.48%. Analyses with Google Search Volume Index support this devastating effect on companies. Durables, construction, manufacturing, and wholesale & retail sectors were less affected by this economic turbulence. We concluded that the announced low-tax economic policy does not always convince markets of future growth, particularly during high inflation and political instability.

1. Introduction

“I have three priorities for our economy: Growth, growth, and growth!”

(Truss, 2022)

After Liz Truss became the UK Prime Minister (PM), her government set out a low-tax policy objective to stimulate growth in the UK businesses. This had been trailed during her election campaign. This policy relied heavily on a wide range of tax cuts to boost domestic economic activity and attract foreign direct investment to the UK which in return would, it was believed, lead to higher growth. Studies (e.g., [Romer and Romer, 2010](#)) show that economic growth can be achieved in a low-tax environment. [Dobbins and Jacob \(2016\)](#) investigate 2008 tax reforms in Germany and show that reduction in corporate tax leads to an increase in real investments of domestic firms, and hence, higher growth in these businesses. Multinational enterprises are likely to move their operations to low-tax countries (e.g., [Beer et al., 2020](#)) leading to employment growth and higher economic activities ([Souillard, 2022](#)). [Zheng and Zhang \(2021\)](#) and [Tu and Liu \(2022\)](#) explore the relation between tax reductions and growth in innovation. They show that tax cuts help companies to engage more in innovation leading to firm growth. [Arnold et al. \(2011\)](#) argue that the reduction of corporate taxes and the top rate of personal income tax enhances growth, but these changes are unlikely to help businesses to recover from crises. Using US quarterly data, [Rangaraju and Herrera \(2021\)](#) suggest that future tax-cut news are more contractionary to businesses during recessions. Overall, the literature suggests although business growth is possible through tax cuts, it is conditional.

In this paper, we focus on the economic turbulence during the reign of the shortest-serving British PM. Particularly, we examine how her low-tax policy objective impacts economy, markets, and firm value given high inflation and political instability in the UK. Studying 1194 public UK firms, we find those companies lose about 0.30% in daily excess returns and £0.87 million in market value for a 1.5-month period, compared to a 3-month pre-Truss period. Analyses with Google Search Volume Index (SVI) also confirm this

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Table 1

Descriptive statistics.

This table provides summary statistics for the main variables in the analyses. *ExcessReturn* (%) is daily stock return less 10-year UK bond yield (Rf); *AbnReturn* (%) is estimated using a 3-month estimation window (27 April – 22 July) for a 3-month event window, i.e., +/-1.5 months around 06 September, (25 July – 19 October); *CAR* (%) is the cumulative abnormal returns for each of those 1.5 months; *MValue* is market value in £10million; *MRP* (Moron risk premium), is the 30-year UK bond yield less 30-year German bond yield less UK risk premium as in [Financial Times \(2022\)](#); *GTrends* is SVI for the search topic “Economy” in the UK normalised by 100; *MarketRf* is FTSE100 daily return less Rf; *Ln(Volume)* is the natural logarithm of daily trading volume. Mean, standard deviation and median values of those variables are provided for a 3-month period before Liz Truss became the PM, as well as, a 1.5-month period during her leadership. Mean comparison T-test results for the dependent variables are provided, and the *** indicates statistical significance at the 1% level.

	Jun1 – Sep5 (3 months)			Sep6 – Oct19 (1.5 months)		
	Mean	Stdev	Median	Mean	Stdev	Median
ExcessReturn	-2.48%	2.59%	-2.29%	-4.12%***	2.89%	-4.08%
AbnReturn	-0.07%	2.93%	-0.07%	-0.74%***	3.49%	-0.72%
CAR	-1.93%	3.83%	-2.60%	-21.7%***	56.7%	-25.6%
MValue	-1.374	4.057	-0.307	-2.141***	5.034	-0.558
MRP	0.13%	0.21%	0.19%	1.00%***	0.34%	0.89%
GTrends	45.98%	7.09%	46.00%	68.86%	14.57%	68.00%
MarketRf	-0.24%	0.11%	-0.21%	-0.40%	0.11%	0.40%
Ln(Volume)	11.843	2.540	12.012	11.899	2.661	12.088

destructive impact on firms. Contrary to growth expectations, cost of borrowing increases as UK’s “Moron Risk Premium” rises by 0.48% contributing to contraction of the UK economy.

2. Data and methodology

We obtain firm data on daily stock returns, trading volume, market value, and sectors from COMPUSTAT-GLOBAL between 01 June 2022 and 19 October 2022. Google Trends provides search data for SVI. Data on FTSE100, 10-year and 30-year UK bonds, monthly GDP growth (%), monthly US federal funds rate, and 30-year German bond rate are collected from FRED, Bloomberg, and Office for National Statistics providing actual and forecast values. Our sample contains 1194 firms with 110,285 firm-day observations.

Table 1 describes major variables winsorised at the 1% and 99% levels. *ExcessReturn* (%) is daily stock return less 10-year UK bond yield (Rf); *AbnReturn* (%) is estimated using a 3-month estimation window (27 April – 22 July) for a 3-month event window, i.e., +/-1.5 months around 06 September, (25 July – 19 October); *CAR* (%) is the cumulative abnormal returns for each of those 1.5 months; *MValue* is market value in £10million; *MRP* (Moron Risk Premium), is the 30-year UK bond yield less 30-year German bond yield less UK risk premium as in [Financial Times \(2022\)](#); *GTrends* is SVI for the search topic “Economy” in the UK normalised by 100; *MarketRf* is FTSE100 daily return less Rf; *Ln(Volume)* is the natural logarithm of daily trading volume. For 1.5-month Truss-period, all return and value measures are more negative and significantly different than for 3-month pre-period. Average *MRP* increases from 0.13% to 1% after Liz Truss became the PM.

We use the following panel OLS regression model with firm fixed effects:

$$\text{Economy and value measures}_{i,t} = \alpha + \beta_1 \text{Post} + \theta X_{i,t} + \eta_i + \varepsilon_{i,t} \quad (1)$$

where *Economyandvaluemeasures*_{*i,t*} represents *ExcessReturn*, *AbnReturn*, *CAR*, *MValue*, *MRP*. *Post* is one for 1.5-month Truss-period (06 September – 19 October) and zero for 3-month pre-period (01 June – 05 September). Through this variable, we examine the impact of low-tax policy objective by the Liz Truss’s government on business growth and firm value. We also replace *Post* with *GTrends* to study the investor sentiment on the UK economy. *X*_{*i,t*} is a vector of control variables (*MarketRf*, *Ln(Volume)*, *USFundRate*, *GDPgrowth*¹). η_i and $\varepsilon_{i,t}$ denote firm fixed effects and the error term, respectively. Standard errors are clustered at the firm level.

3. Results

Regression results in **Table 2** are statically significant at the 1% level, indicating the devastating effect of the announced low-tax policy objective on British economy and companies. In Columns I-V, UK firms each lose 0.30% in daily excess returns and £0.87 million in market value on average after Liz Truss became the PM. Daily abnormal returns are also negative at 0.08%. During Truss’s government, UK firms suffer from a cumulative return loss of 19.70% compared to the 45-day period before 06September. After factoring out the effect of global monetary tightening, these findings offer important insight into how the market’s anticipation of growth changes as manifested in declining market prices. Contrary to growth expectations, the implementation of low-tax policy by her government served to push the already fragile UK economy off the cliff as the yield spread between long-term UK and German (as a more stable, benchmark economy) bonds widened significantly. Subsequently, the UK’s Moron Risk premium increases by 0.48% in

¹ Following [Devos and Rahman \(2018\)](#), we control for contemporaneous macro-economic conditions. We also obtain similar findings with inflation and UK unemployment rate.

Table 2

Impact of “low-tax” policy objective on firm value and business growth.

This table presents estimates for *post* and *GTrends* along with *MarketRf*, *Ln(Volume)*, *USFundRate*, and *GDPgrowth* as control variables. *ExcessReturn*, *AbnReturn*, *CAR*, *MValue*, and *MRP* are the dependent variables. *ExcessReturn* (%) is daily stock return less 10-year UK bond yield (Rf); *AbnReturn* (%) is estimated using a 3-month estimation window (27 April – 22 July) for a 3-month event window, i.e., ± 1.5 months around 06 September, (25 July – 19 October); *CAR* (%) is the cumulative abnormal returns for each of those 1.5 months; *MValue* is market value in £10million; *MRP* (Moron risk premium), is the 30-year UK bond yield less 30-year German bond yield less UK risk premium as in [Financial Times \(2022\)](#). *Post* is one for 1.5-month Truss-period (06 September – 19 October) and zero for 3-month pre-period (01 June – 05 September). *GTrends* is SVI for the search topic “Economy” in the UK normalised by 100. *USFundRate* and *GDPgrowth* represent monthly US federal funds rate and UK GDP growth. Firm fixed effects are included. Standard errors are clustered by firms and given in parentheses. The ***, **, * indicate statistical significance at the 1%, 5%, 10% level respectively.

	ExcessReturn I	AbnReturn II	CAR III	MValue IV	MRP V	ExcessReturn VI	AbnReturn VII	CAR VIII	MValue IX	MRP X
Post	−0.304*** (0.0373)	−0.0765** (0.0386)	−19.70*** (1.095)	−0.0865*** (0.0329)	0.481*** (0.000402)					
GTrends						−2.011*** (0.0889)	−1.597*** (0.103)	−24.73*** (1.354)	−0.673*** (0.0890)	1.146*** (0.00132)
MarketRf	0.679*** (0.0139)	0.317*** (0.0151)	0.0195 (0.0168)	0.367*** (0.0228)	−0.0473*** (0.000120)	0.612*** (0.0146)	0.239*** (0.0152)	0.399*** (0.0289)	0.343*** (0.0228)	−0.0308*** (0.000110)
Ln(Volume)	0.0177** (0.00890)	0.0372** (0.0172)	0.474*** (0.126)	−0.0474*** (0.0166)	0.00159*** (0.000484)	0.0211** (0.00884)	0.0420** (0.0171)	0.465*** (0.128)	−0.0463*** (0.0166)	0.000403 (0.000498)
GDPgrowth	0.482*** (0.0279)	−0.187*** (0.0551)	0.0221 (0.106)	0.159*** (0.0265)	0.154*** (0.000399)	0.360*** (0.0265)	−0.278*** (0.0527)	9.798*** (0.543)	0.112*** (0.0244)	0.105*** (0.000367)
USFundRate	−0.0902*** (0.0181)	−0.231*** (0.0532)	0.139* (0.0787)	−0.0117 (0.0235)	0.362*** (0.000209)	−0.114*** (0.0148)	−0.0764 (0.0520)	−8.056*** (0.464)	−0.0131 (0.0205)	0.512*** (0.000180)
Constant	−0.873*** (0.111)	0.731*** (0.247)	−8.420*** (1.636)	0.0376 (0.185)	−0.625*** (0.00575)	−0.0975 (0.111)	0.886*** (0.245)	20.22*** (2.603)	0.283 (0.193)	−1.351*** (0.00590)
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adj. R ²	0.144	0.028	0.218	0.037	0.860	0.149	0.032	0.162	0.037	0.853
Observations	110,285	68,616	68,616	110,285	110,285	110,285	68,616	68,616	110,285	110,285

Table 3

Sector analyses.

This table presents sector-specific estimates for *post* regarding Fama-French 10 industries. Panels A and B display findings for *ExcessReturn*, and *MValue*, respectively. *ExcessReturn* (%) is daily stock return less 10-year UK bond yield (Rf); *MValue* is market value in £10million. *Post* is one for 1.5-month Truss-period (06 September – 19 October) and zero for 3-month pre-period (01 June – 05 September). Controls and firm fixed effects are included. Standard errors are clustered by firms and given in parentheses. The ***, **, * indicate statistical significance at the 1%, 5%, 10% level respectively.

Panel A: Results for ExcessReturn										
Sectors:	NonDur. I	Durables II	Manuf. III	Energy IV	Electronics V	Wholes&R VI	Healthcare VII	Service VIII	Construct. IX	Finance X
Post	-0.559*	-0.290	-0.0732	-0.697***	-0.661***	0.217	-0.455***	-0.283***	0.0915	-0.265***
	(0.292)	(0.344)	(0.176)	(0.134)	(0.172)	(0.141)	(0.145)	(0.0799)	(0.176)	(0.0508)
Controls&FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adj. R ²	0.174	0.100	0.134	0.076	0.112	0.153	0.090	0.137	0.200	0.237
Observations	2418	1678	5805	13,707	4801	7127	8280	23,572	5563	37,334
Panel B: Results for MValue										
Post	-0.247*	-0.0283	0.0165	-0.575***	-0.129*	0.197	-0.317***	-0.0536*	0.180	0.0297
	(0.136)	(0.0704)	(0.144)	(0.173)	(0.0703)	(0.657)	(0.110)	(0.0306)	(0.174)	(0.0474)
Controls&FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adj. R ²	0.108	0.030	0.036	0.042	0.022	0.061	0.021	0.033	0.043	0.061
Observations	2418	1678	5805	13,707	4801	7127	8280	23,572	5563	37,334

that period leading to contraction of the UK economy.

Table 2 also studies the investor sentiment on the UK economy in Columns VI–X. More searches on the UK economy in google² after 06 September (also see in Table 1), arguably by the public (including investors) with growing anxiety, are associated with lower excess and abnormal returns. As searches on the economy increase due to their concerns fuelled by economic policy of cutting taxes, companies lose more market value and the UK's MRP increases by 1.15%. These are indications of growing economic turmoil during the Liz Truss's government. Overall, the findings in Table 2 suggest that the low-tax policy objective by the PM has been detrimental to firms and the UK businesses in general while the public sentiment on the economy has worsened, companies have lost millions of pounds in return and value and the UK borrowing cost increased significantly.

Extending our research to Fama-French 10 industries in Table 3, we find that firms in almost all sectors were affected negatively through lost returns and value. Such damaging impact is not fully evident for durables, construction, wholesale & retail, and manufacturing sectors. This intriguing finding provides opportunities for future research.

4. Conclusion

Increasing economic activity and attracting foreign direct investment by creating a low-tax business environment is a common policy that governments usually state will serve to boost growth. However, it is not guaranteed. Our results indicate that firms experience negative returns and losses in market value, and the increased cost of borrowing contributes to contraction of the UK economy after Liz Truss became the PM and implemented a wide range of tax cuts. Given the fragile state of the economy, high inflation, and political instability in the country, her government's low-tax policy objective drove the UK into deeper economic turbulence, contrary to expectations of business growth.

CRedit authorship contribution statement

Onur Kemal Tosun: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft.
Brian Lucey: Conceptualization, Writing – review & editing.

Declarations of Competing Interest

We hereby confirm that we do not have any declaration of interests.

Data availability

Data will be made available on request.

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² We obtain similar results using searches on the economy in the news websites only, rather than the whole web.