WU WIRTSCHAFTS
UNIVERSITÄT
WIEN VIENNA
UNIVERSITY OF
ECONOMICS
AND BUSINESS

MASTERARBEIT / MASTER'S THESIS

Titel und ggf. Untertitel der Masterarbeit / Title and, if applicable, subtitle of the Master's Thesis

Titel/Title

verfasst von / submitted by

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angestrebter akademischer Grad / intended degree:

Master of Science (WU) / MSc (WU)

Matrikelnummer / student ID number: 11921713
Studium / degree programme: Quantitative Finance
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Wien, September 2025 / Vienna, September 2025

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1 Introduction

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2 Theoretical Framework

2.1 Polymarket

3   Data

4   Metholodogy

5 Results

5.1 Granger Causality

5.1.1 1 minute

Table 1: Blockwise PM Granger causes ZQ table (eigen)

Meeting	F-statistic	df1	df2	p-value	significance
2023 February	None	None	None	None	None
2023 March	6.2489	60	238410	0	***
2023 May	3.4130	12	172136	0	***
2023 June	1.4808	42	213225	0.0230	*
2023 July	0.7328	12	131310	0.7205	
2023 September	0.5797	11	112926	0.8471	
2023 November	1.2375	9	82726	0.2664	
2023 December	0.4273	16	106294	0.9763	
2024 January	0.5676	96	213844	0.9998	
2024 March	1.6064	30	245890	0.0190	*
2024 May	2.3942	15	114856	0.0018	**
2024 June	1.9469	42	171556	0.0002	***
2024 July	1.0100	12	200788	0.4361	
2024 September	4.5131	48	278940	0	***
2024 November	3.8492	345	789528	0	***
2024 December	0.7360	240	966889	0.9992	
2025 January	0.5480	64	508908	0.9988	
2025 March	0.4277	138	467355	1	
2025 May	3.4771	27	426084	0	***
2025 June	0.8399	120	674600	0.8979	
2025 July	None	None	None	None	None

Table 2: Blockwise PM Granger causes ZQ table (trace)

Meeting	F-statistic	df1	df2	p-value	significance
2023 February	None	None	None	None	None
2023 March	6.2489	60	238410	0	***
2023 May	3.4153	12	172140	0	***
2023 June	1.4763	42	213220	0.0239	*
2023 July	0.7328	12	131310	0.7205	
2023 September	0.5797	11	112926	0.8471	
2023 November	1.2375	9	82726	0.2664	
2023 December	0.4273	16	106294	0.9763	
2024 January	0.5676	96	213844	0.9998	
2024 March	1.6064	30	245890	0.0190	*
2024 May	2.3942	15	114856	0.0018	**
2024 June	1.9469	42	171556	0.0002	***
2024 July	1.0100	12	200788	0.4361	
2024 September	4.5131	48	278940	0	***
2024 November	3.8492	345	789528	0	***
2024 December	0.7360	240	966889	0.9992	
2025 January	0.5480	64	508908	0.9988	
2025 March	0.4277	138	467355	1	
2025 May	3.4771	27	426084	0	***
2025 June	0.8399	120	674600	0.8979	
2025 July	None	None	None	None	None

Table 3: Blockwise ZQ Granger causes PM table (eigen)

Meeting	F-statistic	df1	df2	p-value	significance
2023 February	None	None	None	None	None
2023 March	5.0076	60	238410	0	***
2023 May	4.0590	12	172140	0	***
2023 June	1.0953	42	213220	0.3100	
2023 July	0.6810	12	131310	0.7715	
2023 September	0.1070	11	112926	0.9999	
2023 November	5.9940	9	82726	0	***
2023 December	0.5485	16	106294	0.9223	
2024 January	0.8695	96	213844	0.8154	
2024 March	0.0319	30	245890	1	
2024 May	1.9907	15	114856	0.0124	*
2024 June	2.2777	42	171556	0	***
2024 July	0.6617	12	200788	0.7898	
2024 September	26.1722	48	278940	0	***
2024 November	8.8129	345	789528	0	***
2024 December	0.7939	240	966889	0.9919	
2025 January	1.7429	64	508908	0.0002	***
2025 March	1.7862	138	467355	0	***
2025 May	11.2943	27	426084	0	***
2025 June	0.8579	120	674600	0.8673	
2025 July	None	None	None	None	None

Table 4: Blockwise ZQ Granger causes PM table (trace)

Meeting	F-statistic	df1	df2	p-value	significance
2023 February	None	None	None	None	None
2023 March	5.0076	60	238410	0	***
2023 May	4.0588	12	172140	0	***
2023 June	1.0690	42	213220	0.3514	
2023 July	0.6810	12	131310	0.7715	
2023 September	0.1070	11	112926	0.9999	
2023 November	5.9940	9	82726	0	***
2023 December	0.5485	16	106294	0.9223	
2024 January	0.8695	96	213844	0.8154	
2024 March	0.0319	30	245890	1	
2024 May	1.9907	15	114856	0.0124	*
2024 June	2.2777	42	171556	0	***
2024 July	0.6617	12	200788	0.7898	
2024 September	26.1722	48	278940	0	***
2024 November	8.8129	345	789528	0	***
2024 December	0.7939	240	966889	0.9919	
2025 January	1.7429	64	508908	0.0002	***
2025 March	1.7862	138	467355	0	***
2025 May	11.2943	27	426084	0	***
2025 June	0.8579	120	674600	0.8673	
2025 July	None	None	None	None	None

5.1.2 5 minute

5.2 Instantaneous Causality

5.2.1 1 minute

Table 5: Blockwise PM instantaneously Granger causes ZQ table (eigen)

Meeting	χ^2	df1	p-value	significance
2023 February	None	None	None	None
2023 March	22.7964	6	0.0009	***
2023 May	1.7779	3	0.6198	
2023 June	7.1283	6	0.3091	
2023 July	0.7415	2	0.6902	
2023 September	0.3182	1	0.5727	
2023 November	3.7030	1	0.0543	.
2023 December	0.0655	1	0.7981	
2024 January	2.0396	4	0.7285	
2024 March	2185.1144	6	0	***
2024 May	4.3906	3	0.2223	
2024 June	1.6870	3	0.6398	
2024 July	5.3890	3	0.1454	
2024 September	80.6587	6	0	***
2024 November	32.5638	15	0.0054	**
2024 December	7.1102	10	0.7150	
2025 January	11.7129	8	0.1645	
2025 March	14.6879	6	0.0228	*
2025 May	14.8822	3	0.0019	**
2025 June	8.0940	6	0.2313	
2025 July	None	None	None	None

Table 6: Blockwise PM instantaneously Granger causes ZQ table (trace)

Meeting	χ^2	df1	p-value	significance
2023 February	None	None	None	None
2023 March	22.7964	6	0.0009	***
2023 May	1.7818	3	0.6189	
2023 June	7.0150	6	0.3195	
2023 July	0.7415	2	0.6902	
2023 September	0.3182	1	0.5727	
2023 November	3.7030	1	0.0543	.
2023 December	0.0655	1	0.7981	
2024 January	2.0396	4	0.7285	
2024 March	2185.1144	6	0	***
2024 May	4.3906	3	0.2223	
2024 June	1.6870	3	0.6398	
2024 July	5.3890	3	0.1454	
2024 September	80.6587	6	0	***
2024 November	32.5638	15	0.0054	**
2024 December	7.1102	10	0.7150	
2025 January	11.7129	8	0.1645	
2025 March	14.6879	6	0.0228	*
2025 May	14.8822	3	0.0019	**
2025 June	8.0940	6	0.2313	
2025 July	None	None	None	None

Table 7: Blockwise ZQ instantaneously Granger causes PM table (eigen)

Meeting	χ^2	df1	p-value	significance
2023 February	None	None	None	None
2023 March	22.7964	6	0.0009	***
2023 May	1.7779	3	0.6198	
2023 June	7.1283	6	0.3091	
2023 July	0.7415	2	0.6902	
2023 September	0.3182	1	0.5727	
2023 November	3.7030	1	0.0543	.
2023 December	0.0655	1	0.7981	
2024 January	2.0396	4	0.7285	
2024 March	2185.1144	6	0	***
2024 May	4.3906	3	0.2223	
2024 June	1.6870	3	0.6398	
2024 July	5.3890	3	0.1454	
2024 September	80.6587	6	0	***
2024 November	32.5638	15	0.0054	**
2024 December	7.1102	10	0.7150	
2025 January	11.7129	8	0.1645	
2025 March	14.6879	6	0.0228	*
2025 May	14.8822	3	0.0019	**
2025 June	8.0940	6	0.2313	
2025 July	None	None	None	None

Table 8: Blockwise ZQ instantaneously Granger causes PM table (trace)

Meeting	χ^2	df1	p-value	significance
2023 February	None	None	None	None
2023 March	22.7964	6	0.0009	***
2023 May	1.7818	3	0.6189	
2023 June	7.0150	6	0.3195	
2023 July	0.7415	2	0.6902	
2023 September	0.3182	1	0.5727	
2023 November	3.7030	1	0.0543	.
2023 December	0.0655	1	0.7981	
2024 January	2.0396	4	0.7285	
2024 March	2185.1144	6	0	***
2024 May	4.3906	3	0.2223	
2024 June	1.6870	3	0.6398	
2024 July	5.3890	3	0.1454	
2024 September	80.6587	6	0	***
2024 November	32.5638	15	0.0054	**
2024 December	7.1102	10	0.7150	
2025 January	11.7129	8	0.1645	
2025 March	14.6879	6	0.0228	*
2025 May	14.8822	3	0.0019	**
2025 June	8.0940	6	0.2313	
2025 July	None	None	None	None

5.2.2 5 minute

6 Discussion

7 Conclusion