

Online appendix “The Oracle or the Crowd: Experts versus the Stock Market in Forecasting Ceasefire Success in the Levant”

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Appendix 1: Content analysis

EAA involves four stages which can be done one after another by a single coder or serially by four different coders. The first stage of EEA requires the identification of attitude objects within the analysed text. Attitude objects are words or signs, whose evaluative meaning can vary from person to person. For example, the underlying opinions that accompany such terms as “George W. Bush” or “Israel” can differ substantially depending on the traits and experience of the individual reading them.

In the second stage of the analysis, the text is transcribed into a set of assertions which relate to the above identified attitude objects. This stage requires the identification of two more types of terms, common meaning terms and verb connectors. Common meaning terms are terms that have similar evaluative meaning across individuals. For example, the words “good” and “peace” are generally perceived positively by people. Verb connectors are verbs or verb phrases which link the attitude object to common meaning terms or other attitude objects. The attitude objects, verb connectors and common meaning terms are crystallised into simplified assertions. For an exhaustive description of how complex sentences can be broken down in the simplified assertion form, please refer to Osgood, Suci and Tannenbaum (1957).

The third stage of EAA involves the allocation of directions and intensities to the verb connectors and evaluators, which may be a common meaning term or an attitude object. This requires the coder to work through each verb connector and evaluator and assign a value, on a scale from -3 to +3, depending on the direction and strength of the word. Once the above described terms and values have been entered into the assertion chart, which is a table to aid the process of EAA, the coder takes the product of the verb connector and the evaluator for each assertion and averages it across the units of analysis. This produces a cumulative evaluative score ranging from -9 to +9 which offers a measure of how positively or negatively the author views the attitude object.

Following the above stages of evaluative assertion analysis and using Krippendorff (2004) as a guide, we have developed the following coding scheme:

CODING SCHEME

PLEASE READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY.

Aim and background

The aim of this procedure is to identify and classify paragraphs extracted from articles within the New York Times, the Jerusalem Post and Ha'aretz.

The articles of interest are those that refer to the 24 ceasefire agreements under examination within this study. These ceasefires were declared between 1990 and 2014 between Israel and a second party. Armed conflicts customarily end with a ceasefire or the surrender of one of the combatants. A ceasefire occurs when both parties to the conflict make declarations to cease hostilities. A ceasefire may also be unilateral, when one of the parties declares a ceasefire and the other does not.

In the case of hostilities ending with a ceasefire, the parties may still possess the resources to resume hostilities in the future. When a ceasefire has been reached, one of the most important questions is: how likely is this ceasefire to succeed? The aim of the coding is to extract media commentaries that explicitly or implicitly answer the question.

Basic instructions

Keeping the above aim and background in mind, please evaluate evaluate the New York Times, Jerusalem Post and Ha'aretz articles by carefully following the coding procedure set out below and recording your work in the assertion chart provided. Each worksheet in the Excel file represents a different ceasefire agreement.

The coding procedure outlined below comprises 9 steps, which should be completed sequentially. These instructions have been designed so that you may complete the coding process autonomously; however, should you have any further questions; please feel free to contact the research team.

Coding Procedure

STEP 1 – Preparing *documents*

For NYT and JP, SEARCH, using Lexis Nexis, for articles between the day of and day after the announced ceasefire.

Download articles.

Convert all articles to rich text format (.rtf).

Proceed to STEP 2.

For Ha'arezz, SEARCH in “Beit Ariela” library in Tel Aviv or in the Haifa University library, for articles written on day of and on the day after the announced ceasefire.

- (2) COPY articles and store as JPG files
 - (3) PROCEED to STEP 2
-

STEP 2 – Entering *basic information* in Excel

- (1) CREATE A NEW SHEET TABLE, using Excel, for *ceasefire, date and newspaper*
 - a. *Ceasefire*: the ceasefire identification number
 - b. *Date*: the date on which the article was published
 - c. *Newspaper*: what newspaper the article appeared in, e.g NYT.
 - d. *Desk*: which desk produced the article, e.g. foreign, metropolitan etc. Note: this information is only relevant for NYT articles.

- (2) PROCEED to STEP 3
-

STEP 3 – Narrowing the *focus*, Note: only relevant for articles from the NYT

DISCARD articles from the NYT which do not originate from the foreign or editorial desks.

PROCEED to STEP 4.

STEP 4 – Extracting *paragraphs*

OPEN articles produced by Ha'aretz for ceasefire id=1

LOCATE all paragraphs including the terms:

- a. agreement
- b. ceasefire
- c. cease-fire
- d. halt
- e. truce, or
- f. withdraw

- (3) EXPORT all paragraphs for relevant articles to a Word document, save as

Haaretz_ *ceasefire_id*. PRINT.

- (4) REPEAT numbers 2 and 3 for all ceasefires.
 - (5) REPEAT 1, 2, 3 and 4 for NYT and the JP.
 - (6) PROCEED to STEP 5
-

STEP 5 – Reading and deciding *relevancy*

- (1) READ through the paragraph carefully and completely.
 - (2) DECIDE whether the paragraph makes reference to the ceasefire at hand,
the answer is YES if:
 - a. It is clear that the paragraph refers to a current event, e.g. YES: *...the ceasefire announced yesterday...* NO: *...the ceasefire following the Yom Kippur War...*
 - b. The paragraph refers to an actual ceasefire and not a different occurrence, e.g. YES: *...Israel and the PLO have agreed to halt fighting...* NO: *...Israel has halted exports to England...*
 - c. The paragraph refers to a ceasefire that has already been announced and is not conjectured, e.g. YES: *...the truce ordered today...* NO: *Lebanon has demanded a truce...*
 - (3) If YES: PROCEED to STEP 6.
 - (4) If NO: PROCEED to STEP 5 for next paragraph.
-

STEP 6 – Identifying the *attitude object*

- (1) CREATE an Assertion Chart in excel for this ceasefire and newspaper.
Columns are labelled AO, VC, VC*, CMT, CMT* and Product.
- (2) IDENTIFY the ATTITUDE OBJECT (AO). This is the ceasefire, truce or however it may be referred to.
- (3) ENTER AO into initial column in excel sheet.
- (4) PROCEED to STEP 7

STEP 7 – transformation into *assertion form*

- (1) IDENTIFY the COMMON MEANING TERM (CMT), this could be an

adjective or a noun with a clear positive or negative implication, e.g.

fragile, war, hopeless, bombing, etc.

- (2) ENTER CMT into fourth column in excel sheet.
 - (3) IDENTIFY the VERB CONNECTOR (VC), this is generally the verb in the sentence; however may also be, if the CMT is an adjective, simply “is”.
 - (4) ENTER VC into second column of excel sheet. E.g.: *The fragile truce survived its first day:*
 - The ceasefire (AO) survived (VC) its first day (CMT).
 - The ceasefire (AO) is (VC) fragile (CMT).
 - (5) REPEAT STEP 5 for next paragraph.
 - (6) PROCEED to STEP 8.
-

STEP 8 – Assigning *directions and intensities* to connectors (VC) and evaluators (CMT)

- (1) ALLOCATE values for VC, depending on the direction and intensity of the verb, whether it is definite, expectant or speculative. Give negative values for verbs that are negated.
 - a. -3/+3: references to the way things are, e.g. *is, halts, etc.*
 - b. -2/+2: references to things that are expected, e.g. *will, is expected, etc.*
 - c. -1/+1: speculation on things that could occur, e.g. *may lead to, could mean, etc.*
- (2) ENTER these values in the VC* column of the assertion chart.
- (3) ALLOCATE values for CMT, depending on the direction and intensity of the term. For example:
 - a. -3: *war, conflict, failure, deceit, etc.*
 - b. -2: *violence, escalation, violated, fighting, resistance, etc.*
 - c. -1: *criticised, conditional, unilateral, fragile, skeptically, etc.*

- d. +1: *first day, ripe, detailed, first step*, etc.
 - e. +2: *calm, credible, refugee return, monitored, reciprocal, withdrawal*,
etc.
 - f. +3: *long term peace, peace talks, disarmament*, etc.
- (4) ENTER these values in the CMT* column of the assertion chart.
 - (5) PROCEED to STEP 9.
-

STEP 9 – Collecting and averaging the assertions to calculate the ***cumulative evaluative scores***.

- (1) CALCULATE the product of the VC and the CMT for each assertion.

Coding example 1; the analysis of a commentary article, published in "Yediot Ahronot" on Thursday, 14.06.2001 (ceasefire event number 9)

The commentary article

Agreement /
Ceasefire /
Tent Plan for
a ceasefire
agreement

Negative CMT
(Common meaning)
terms

בשולי ידיעות אחרונות

המפא"ניק האחרון

הודעתה של ישראל, אתמול, על קבלתה, ללא תנאים, את, תוכנית טנט" להסכם הפסקת אש, מחייבת את יאסר ערפאת להזעיק מייד את ראשי יחידות המודיעין שלו - אלה הקרויים, גורמי הערכה - לכנס אותם לשיבה רחופה, ולשאול: היי, אתם - ההיינו, או חלמנו חלום? ובמילים אחרות: הוהו אריק שרון שהכרנו משך שנות דור, או שקרה מש-הו לאיש הזה?

ההסכמה הישראלית, ללא תנאים, היא **תרגיל** מפא"ניקי כהלכה: שרון וחבורתו מנחשים, כנראה נכון, שהפלשתינים ידחו את, תוכנית טנט" ואף שהישראלים אינם מברכים על התוכנית כולה, או לפחות על חלקה - לוקחים סיכון במשחק הפוקר הפרי ליטי ואומרים, כן. עד שהתוכנית תתגלגל במסדרונות הפוליטיים - ימותו הפריץ, או הכלב, ואפשר יהיה לסמוך על פלשתינן אחה, לפחנת, שיהיה, הי, טיפש. כדי לפתוח באש ולתת לשרון סיבה טובה לומר, בעיקר לאמריקנים: אתם רואים... בינתיים צובר שרון נקודות חיוביות בווינגטון, אולי גם מעט באירופה ובוודאי בישראל. המפא"ניק האחרון כפוליטיקה הישראלית מראה לפלשתינים מהיכן מטיל הרג את מימיו.

ואולם, מוטב שלא יהיו איי הבנות: כל הא-מור למעלה אינו אלא נבחינת הכנה מדינית - מוצלחת בשלב זה - למכה הצבאית שכ-לם מחכים לה בעמידה מתוחה על בהונות הרגליים. כמו בבריחה הידועה על השמן מה קומה הראשונה, שלא יכול היה להירדם עד שלא תיפול הנעל השנייה של השכן מהקומה שמעליו - כך מחכים הכול לנפילתה של הנ-על באישון לילה. נו כבר...

או אז יוכל שרון לטעון ששילם את כל המחירים שבעולם כדי להגיע להפסקת אש: ראיתם אותי בהלוויה הכואבת של התינוק? שמעתם את הקריאות נגדי? את התביעות לבקמה? מה עוד תבקשי מאיתנו, מכורה? בינתיים עוד שעה חולפת, עוד יום עובר, ושרון נהנה מכל העולמות. אך הגרגרים אור-לים בשעון החול, וכל פצוע וכל פגז מרגמה מקרבים את שעת העימות.

True
Risk

X

The assertion chart

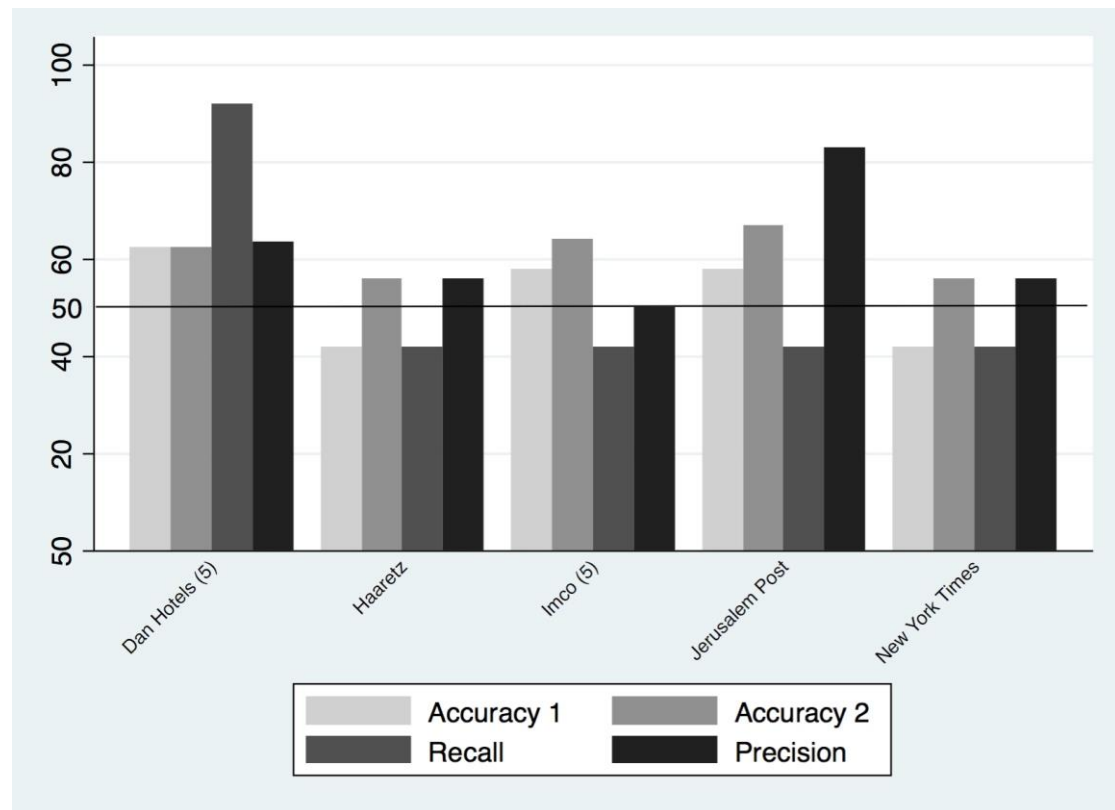
Ceasefire ID 9			14.06.2001	Yediot Ahronot	
AO	VC	VC*	CMT	CMT*	Evaluative scores
Tenet plan for a ceasefire agreement	Is	3	A trick	-3	-9
The agreement	Is	3	Unsupported (by the Israelis)	-3	-9
Tenet plan	Will be	2	Denied (by the Palestinians)	-3	-6
Tenet plan	Is	3	A risk (taken by the Israelis)	-1	-3
The agreement	Will be	2	Broken (by the Palestinians)	-3	-6
The agreement	Will lead to	2	Military strike (“that we all waiting for”) after being broken by the Palestinians	-2	-4
The agreement	Was reached (Is)	3	at high costs (for the Israelis)	-1	-3

Coding example 2; the analysis of ceasefire event number 1 by “Haaretz” (in Hebrew)

הערות skeptical	הערות Agreement is conditional credible	הערות first step	הערות	עיתון:	הסכם מס. 1	
סרי"כ	CMT*	CMT*	CMT	VC*	VC	AO
-1	-1	-1	תחזיק מעמד -1	1	1	הבנה להפסקת אש
1	1	1	תחזיק מעמד -1	-1	1	הבנה להפסקת אש
3	3	3	הישג מוגבל 1	3	3	הבנה להפסקת אש
-3	-1	-1	זמנית -1	3	3	הבנה להפסקת אש
-6	2	2	כתוב ותחום 2	-3	5	ההסכם
-6	3	3	פתח בלתי נמנע בתנאי הנכונים שמשמעותו כי הקרב על רצועת הביטחון יימשך -2	3	6	ההסכם
6	3	3	מקפצה לזרז את תהליך השלום	2	7	ההסכם
-2	3	3	הישג חלקי אם הפסקת האש תהיה לכמה חודשים -1	2	8	ההסכם
6	3	3	מוצל לזרז תהליך השלום	2	9	ההסכם
2	1	1	קשה למדידה 1	2	10	הצלחת המבצע
3	1	1	חיובי 1	3	11	הסכם
6	2	2	מפחיתה את חשדות האדוים ומשפרת את התקשורת ביניהם 2	3	12	עוזי במיון
2	2	2	מנוצל לקידום התהליך המדיני 2	1	13	ההסכם
9	3	3	לבואו של וורן כריסטופר לאור 3	3	14	ההסכם
2	2	2	לדיעה 2	1	15	ההסכם
2	2	2	חזרה לשגרת חיים בשני הצדדים 2	1	16	הפסקת האש
6	2	2	הישג 2	3	17	הפסקת האש
3	3	3	מנוף להחייאת תהליך השלום 3	1	18	הפסקת האש
30	30	30				
1.66666667	1.66666667	1.66666667				

Appendix 2: Additional Tables and Figures

Figure A2-1: Predictive accuracy of financial market assets and newspaper reports.



Accuracy 1 is calculated as the number of correct predictions divided by the number of ceasefires (24) while Accuracy 2 is calculated as the number of correct predictions divided by the number of overall predictions made by the specific media outlet. Recall is the ratio of the number of correctly predicted successes and the number of successes, and precision divides the number of correctly predicted successes with the number of predicted successes. The calculations refer to a time horizon of 7 days following the announcement of every ceasefire and a violence threshold of 7 violent events. The event window used with regard to the assets' analysis is (-5, 0).

Table A2- I *The effect of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events - Additional results (7 days time frame, 10 violent events)*

	[-3,0] event window				[-5,0] event window		
<i>DAN HOTELS</i>				0.02 (0.02)		0.02 (0.02)	
<i>IMCO INDUSTRIES</i>					0.01 (0.02)		-0.004 (0.02)
<i>HA'ARETZ</i> <small>CES</small>	-0.16* (0.08)						
<i>JERUSALEM POST</i> <small>CES</small>		-0.345** (0.13)					
<i>NEW YORK TIMES</i> <small>CES</small>			-0.07 (0.06)				
<i>Constant</i>	2.14*** (0.18)	1.91*** (0.22)	2.23*** (0.31)	2.41*** (0.20)	2.38*** (0.21)	2.42*** (0.20)	2.39*** (0.21)
<i>N</i>	18	21	24	24	24	24	24
<i>Log (pseudo) likelihood</i>	-55.79	-67.20	-81.57	-81.41	-82.08	-81.38	-82.20
<i>Alpha</i>	0.46 (0.18)	0.57 (0.20)	0.87 (0.27)	0.87 (0.27)	0.92 (0.28)	0.87 (0.27)	0.92 (0.28)
<i>Notes:</i> Standard errors are given in parentheses. *p≤0.1; **p≤0.05; ***p≤0.01							

Table A2-II *The effect of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events - Additional results (7 days time frame, 10 violent events threshold, robust standard errors)*

	[-3,0] event window					[-5,0] event window	
<i>DAN HOTELS</i>				0.02*** (0.00)		0.02*** (0.00)	
<i>IMCO INDUSTRIES</i>					0.01 (0.03)		-0.004 (0.01)
<i>HA'ARETZ</i> <small>CES</small>	-0.16** (0.06)						
<i>JERUSALEM POST</i> <small>CES</small>		-0.345** (0.11)					
<i>NEW YORK TIMES</i> <small>CES</small>			-0.07 (0.07)				
<i>Constant</i>	2.14*** (0.20)	1.90*** (0.19)	2.24*** (0.24)	2.42*** (0.21)	2.38*** (0.21)	2.42*** (0.21)	2.39*** (0.21)
<i>N</i>	18	21	24	24	24	24	24
<i>Log (pseudo) likelihood</i>	-55.79	-67.20	-81.57	-81.41	-82.08	-81.38	-82.20
<i>Alpha</i>	0.46 (0.13)	0.57 (0.15)	0.87 (0.22)	0.87 (0.21)	0.92 (0.21)	0.92 (0.21)	0.92 (0.21)
<i>Notes:</i> Standard errors are given in parentheses. *p≤0.1; **p≤0.05; ***p≤0.01							

Table A3- The effect of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events - Additional results (14 days time frame, 14 violent events threshold, robust standard errors)

	[-3,0] event window					[-5,0] event window	
<i>DAN HOTELS</i>				0.02*** (0.00)		0.02*** (0.00)	
<i>IMCO INDUSTRIES</i>					0.01 (0.03)		-0.006 (0.02)
<i>HA'ARETZ</i> <small>CES</small>	-0.12 (0.06)						
<i>JERUSALEM POST</i> <small>CES</small>		-0.33** (0.10)					
<i>NEW YORK TIMES</i> <small>CES</small>			-0.05 (0.07)				
<i>Constant</i>	2.70*** (0.20)	2.53*** (0.15)	2.91*** (0.15)	3.01*** (0.20)	2.98*** (0.21)	3.01*** (0.20)	2.98*** (0.21)
<i>N</i>	18	21	24	24	24	24	24
<i>Log (pseudo) likelihood</i>	-65.44	-78.34	-94.92	-94.42	-95.23	-94.37	-95.38
<i>Alpha</i>	0.50 (0.12)	0.48 (0.13)	0.70 (0.11)	0.67 (0.10)	0.70 (0.11)	0.66 (0.10)	0.71 (0.11)
<i>Notes:</i> Standard errors are given in parentheses. * $p \leq 0.1$; ** $p \leq 0.05$; *** $p \leq 0.01$							

Table A4 *The effect of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events – OLS regression (7 days time frame)*

	[-3,0] event window					[-5,0] event window	
<i>DAN HOTELS</i>				0.12		0.12 (0.15)	

				(0.15)			
<i>IMCO INDUSTRIES</i>					0.06 (0.17)		-0.02 (0.14)
<i>HA'ARETZ</i> <small>CES</small>	-1.20 (0.81)						
<i>JERUSALEM POST</i> <small>CES</small>		-2.61 (1.29)					
<i>NEW YORK TIMES</i> <small>CES</small>			-1.35 (0.88)				
Constant	9.09*** (1.91)	7.89*** (2.28)	9.65*** (2.33)	11.21*** (2.33)	10.86*** (2.31)	11.24*** (2.33)	10.86*** (2.32)
N	18	21	24	24	24	24	24
R ²	0.12	0.18	0.1	0.03	0.005	0.03	0.001
Adjusted R ²	0.07	0.13	0.05	-0.02	-0.04	-0.02	-0.04
<i>Notes:</i> Standard errors are given in parentheses. *p≤0.1; **p≤0.05; ***p≤0.01							

Table A5 *The effect of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events – OLS regression (14 days time frame)*

	[-3,0] event window				[-5,0] event window		
<i>DAN HOTELS</i>				0.21		0.22 (0.26)	

				(0.27)			
<i>IMCO INDUSTRIES</i>					0.10 (0.31)		-0.04 (0.25)
<i>HA'ARETZ</i> <small>CES</small>	-1.54 (1.49)						
<i>JERUSALEM POST</i> <small>CES</small>		-4.67 (2.31)					
<i>NEW YORK TIMES</i> <small>CES</small>			-1.35 (0.88)				
<i>Constant</i>	15.38*** (1.49)	14.43** (4.09)	9.65*** (2.33)	20.35*** (4.17)	20.39*** (4.17)	20.39*** (4.17)	19.72*** (4.14)
<i>N</i>	18	21	24	24	24	24	24
<i>R</i> ²	0.06	0.18	0.06	0.03	0.005	0.03	0.001
<i>Adjusted R</i> ²	0.005	0.13	0.02	-0.02	-0.04	-0.01	-0.04
<i>Notes:</i> Standard errors are given in parentheses. *p≤0.1; **p≤0.05; ***p≤0.01							

Appendix III

This webappendix reports additional results for tests with additional estimation windows. The estimation window reported in the article is [-10, 50]

The new estimation windows are [-5, 50], [-10, 40], [-10,100], and [-15,50]. As can be seen, the results do not change much although the impact of the Dan Hotels CARs loses significance in the negbin analysis.

Table A3- I. Ceasefires and the predictions of the different ‘forecasters’ using [-5,50] event window for the stock’s analysis

	<i>Date</i>	<i>Number of violent events</i>	<i>Predictors</i>				
			<i>‘Crowed’</i>		<i>‘Oracles’</i>		
			<i>Dan Hotels</i>	<i>IMCO</i>	<i>Haaretz</i>	<i>JP</i>	<i>NYT</i>
1	31 July 1993	9	S	F	S	S	S
2	05 March 1996	12	F	F	S	S	S
3	26 April 1996	7	F	F	S	F	F
4	30 September 2000	69	F	F	-	-	F
5	08 October 2000	51	F	F	-	F	S
6	17 October 2000	52	F	F	F	F	F
7	02 November 2000	53	S	S	F	F	F
8	23 May 2001	22	F	S	F	F	F
9	13 June 2001	15	S	F	F	F	F
10	18 September 2001	13	S	F	S	F	S
11	16 December 2001	9	F	F	-	F	S
12	21 February 2003	9	S	F	-	S	F
13	29 June 2003	5	S	S	F	S	S
14	18 January 2005	6	S	S	-	-	F
15	07 February 2005	3	S	S	S	S	S
16	25 September 2005	11	S	S	F	-	F
17	30 July 2006	52	F	F	-	F	S
18	12 August 2006	29	F	F	S	F	F
19	25 November 2006	7	F	S	F	F	F
20	17 June 2008	6	F	F	S	S	S
21	16 January 2009	12	S	S	S	F	F

Table A3-II: The effects of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of

22	subsequent violent events (14 days time frame, 14 violent events, [-5,50] event window for the stock's analysis)						
23	21 March 2012	10	S	S	F	F	F
24	26 August 2014	4	F	S	S	F	F
	<i>DAN HOTELS</i>	0.02 (0.01)					
	<i>IMCO INDUSTRIES</i>						
	Correctly predicted successes	9/16	0.02 (0.02)	8/16	6/16	7/16	
	<i>HAARETZ CES</i>				-0,12 (0,08)		
	<i>JERUSALEM POST CES</i>					-0.332** (0.12)	
	<i>NEW YORK TIMES CES</i>						-0.005 (0.05)
	<i>Constant</i>	3.01*** (0.18)	2.98*** (0.18)	2.70*** (0.18)	2.53*** (0.19)	2.92*** (0.18)	
	<i>N</i>	24	24	18	21	24	
	<i>Log (pseudo) likelihood</i>	-94.48	-95.08	-65.44	-78.34	-94.92	
	<i>Alpha</i>	0.67 (0.19)	0.70 (0.20)	0.51 (0.18)	0.48 (0.16)	0.68 (0.20)	
<i>Notes:</i> Standard errors are given in parentheses. *p<0.1; **p<0.05; ***p<0.01							

Table A4- I. Ceasefires and the predictions of the different ‘forecasters’ using [-10,40] event window for the stock’s analysis

		<i>Number of violent events</i>	<i>Predictors</i>				
<i>Date</i>			<i>‘Crowed’</i>		<i>‘Oracles’</i>		
			<i>Dan Hotels</i>	<i>IMCO</i>	<i>Haaretz</i>	<i>JP</i>	<i>NYT</i>
1	31 July 1993	9	S	F	S	S	S
2	05 March 1996	12	F	F	S	S	S
3	26 April 1996	7	F	F	S	F	F
4	30 September 2000	69	F	F	-	-	F
5	08 October 2000	51	F	F	-	F	S
6	17 October 2000	52	F	F	F	F	F
7	02 November 2000	53	S	S	F	F	F
8	23 May 2001	22	F	F	F	F	F
9	13 June 2001	15	S	S	F	F	F
10	18 September 2001	13	S	F	S	F	S
11	16 December 2001	9	F	F	-	F	S
12	21 February 2003	9	S	F	-	S	F
13	29 June 2003	5	S	S	F	S	S
14	18 January 2005	6	S	S	-	-	F
15	07 February 2005	3	S	S	S	S	S
16	25 September 2005	11	S	S	F	-	F
17	30 July 2006	52	F	F	-	F	S
18	12 August 2006	29	F	F	S	F	F
19	25 November 2006	7	S	F	F	F	F
20	17 June 2008	6	F	F	S	S	S
21	16 January 2009	12	F	S	S	F	F
22	13 March 2012	6	S	F	F	F	F
23	21 November 2012	10	F	S	F	F	F
24	26 August 2014	4	F	S	S	F	F
Predicted successes (S) failures (F):			11S, 13F	9S,15F	9S, 9F	6S,15F	9S,15F
Correctly predicted successes			9/16	7/16	8/16	6/16	7/16
Correctly predicted failures			6/8	6/8	4/8	7/8	6/8

Table A4- II: The effects of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events (14 days time frame, 14 violent events, [-10,40] event window for the stock's analysis)

<i>DAN HOTELS</i>	0.23 (0.02)				
<i>IMCO INDUSTRIES</i>		0.01 (0.02)			
<i>HAARETZ CES</i>			-0,12 (0,08)		
<i>JERUSALEM POST CES</i>				-0.332** (0.12)	
<i>NEW YORK TIMES CES</i>					-0.005 (0.05)
<i>Constant</i>	3.01*** (0.18)	2.98*** (0.18)	2.70*** (0.18)	2.53*** (0.19)	2.92*** (0.18)
<i>N</i>	24	24	18	21	24
<i>Log (pseudo) likelihood</i>	-94.65	-95.27	-65.44	-78.34	-94.92
<i>Alpha</i>	0.68 (0.19)	0.70 (0.20)	0.51 (0.18)	0.48 (0.16)	0.68 (0.20)
<i>Notes:</i> Standard errors are given in parentheses. * $p \leq 0.1$; ** $p \leq 0.05$; *** $p \leq 0.01$					

Table A5-I. Ceasefires and the predictions of the different ‘forecasters’ using [-10,100] event window for the stock’s analysis

		<i>Number of violent events</i>	<i>Predictors</i>				
<i>Date</i>			<i>‘Crowed’</i>		<i>‘Oracles’</i>		
			<i>Dan Hotels</i>	<i>IMCO</i>	<i>Haaretz</i>	<i>JP</i>	<i>NYT</i>
1	31 July 1993	9	S	F	S	S	S
2	05 March 1996	12	F	F	S	S	S
3	26 April 1996	7	F	F	S	F	F
4	30 September 2000	69	F	F	-	-	F
5	08 October 2000	51	F	F	-	F	S
6	17 October 2000	52	S	F	F	F	F
7	02 November 2000	53	S	S	F	F	F
8	23 May 2001	22	F	S	F	F	F
9	13 June 2001	15	S	F	F	F	F
10	18 September 2001	13	S	F	S	F	S
11	16 December 2001	9	F	F	-	F	S
12	21 February 2003	9	S	F	-	S	F
13	29 June 2003	5	S	S	F	S	S
14	18 January 2005	6	S	S	-	-	F
15	07 February 2005	3	S	S	S	S	S
16	25 September 2005	11	S	S	F	-	F
17	30 July 2006	52	F	S	-	F	S
18	12 August 2006	29	F	S	S	F	F
19	25 November 2006	7	F	F	F	F	F
20	17 June 2008	6	S	F	S	S	S
21	16 January 2009	12	S	S	S	F	F
22	13 March 2012	6	S	F	F	F	F
23	21 November 2012	10	S	S	F	F	F
24	26 August 2014	4	F	S	S	F	F
Predicted successes (S) failures (F):			14S, 10F	11S,13F	9S, 9F	6S,15F	9S,15F
Correctly predicted successes			11/16	7/16	8/16	6/16	7/16
Correctly predicted failures			5/8	4/8	4/8	7/8	6/8

Table A5-II: The effects of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events (14 days time frame, 14 violent events, [-10,100] event window for the stock's analysis)

<i>DAN HOTELS</i>	0.2 (0.02)				
<i>IMCO INDUSTRIES</i>		0.03 (0.02)			
<i>HAARETZ CES</i>			-0,12 (0,08)		
<i>JERUSALEM POST CES</i>				-0.332** (0.12)	
<i>NEW YORK TIMES CES</i>					-0.005 (0.05)
<i>Constant</i>	3.00*** (0.18)	3.01*** (0.18)	2.70*** (0.18)	2.53*** (0.19)	2.92*** (0.18)
<i>N</i>	24	24	18	21	24
<i>Log (pseudo) likelihood</i>	-94.91	-94.52	-65.44	-78.34	-94.92
<i>Alpha</i>	0.69 (0.20)	0.67 (0.19)	0.51 (0.18)	0.48 (0.16)	0.68 (0.20)
<i>Notes:</i> Standard errors are given in parentheses. * $p \leq 0.1$; ** $p \leq 0.05$; *** $p \leq 0.01$					

Table A6-I. Ceasefires and the predictions of the different ‘forecasters’ using [-15,50] event window for the stock’s analysis

		<i>Number of violent events</i>	<i>Predictors</i>				
<i>Date</i>			<i>‘Crowed’</i>		<i>‘Oracles’</i>		
			<i>Dan Hotels</i>	<i>IMCO</i>	<i>Haaretz</i>	<i>JP</i>	<i>NYT</i>
1	31 July 1993	9	S	F	S	S	S
2	05 March 1996	12	F	F	S	S	S
3	26 April 1996	7	S	F	S	F	F
4	30 September 2000	69	F	F	-	-	F
5	08 October 2000	51	F	F	-	F	S
6	17 October 2000	52	F	F	F	F	F
7	02 November 2000	53	S	S	F	F	F
8	23 May 2001	22	F	S	F	F	F
9	13 June 2001	15	S	F	F	F	F
10	18 September 2001	13	S	F	S	F	S
11	16 December 2001	9	F	F	-	F	S
12	21 February 2003	9	S	F	-	S	F
13	29 June 2003	5	S	S	F	S	S
14	18 January 2005	6	S	S	-	-	F
15	07 February 2005	3	S	S	S	S	S
16	25 September 2005	11	S	S	F	-	F
17	30 July 2006	52	F	F	-	F	S
18	12 August 2006	29	F	F	S	F	F
19	25 November 2006	7	F	S	F	F	F
20	17 June 2008	6	F	F	S	S	S
21	16 January 2009	12	S	S	S	F	F
22	13 March 2012	6	F	F	F	F	F
23	21 November 2012	10	S	S	F	F	F
24	26 August 2014	4	F	S	S	F	F
Predicted successes (S) failures (F):			12S, 12F	10S,14F	9S, 9F	6S,15F	9S,15F
Correctly predicted successes			10/16	8/16	8/16	6/16	7/16
Correctly predicted failures			6/8	6/8	4/8	7/8	6/8

Table A6- II: The effects of ceasefire-induced Cumulative Abnormal Returns and newspaper ceasefire assessments on the number of subsequent violent events (14 days time frame, 14 violent events, [-15,50] event window for the stock's analysis)

<i>DAN HOTELS</i>	0.21 (0.01)				
<i>IMCO INDUSTRIES</i>		0.02 (0.02)			
<i>HAARETZ CES</i>			-0,12 (0,08)		
<i>JERUSALEM POST CES</i>				-0.332** (0.12)	
<i>NEW YORK TIMES CES</i>					-0.005 (0.05)
<i>Constant</i>	3.01*** (0.18)	2.99*** (0.18)	2.70*** (0.18)	2.53*** (0.19)	2.92*** (0.18)
<i>N</i>	24	24	18	21	24
<i>Log (pseudo) likelihood</i>	-94.45	-94.99	-65.44	-78.34	-94.92
<i>Alpha</i>	0.67 (0.19)	0.70 (0.20)	0.51 (0.18)	0.48 (0.16)	0.68 (0.20)
<i>Notes:</i> Standard errors are given in parentheses. *p≤0.1; **p≤0.05; ***p≤0.01					

Appendix 3: Receiver Operator Characteristic analysis and Brier scores

We also applied Receiver Operator Characteristic (ROC) analysis, which illustrates the comparison of four groups of predictions: true positives, false positives, false negatives and true negatives, under all possible categorisations of the predicting variables. Although, for O'Brien's (2002) performance metrics, we classified negative cumulative evaluative scores as a pessimistic prediction, this simplification is not necessary for ROC analysis. The ROC plots for the 14 violent event threshold can be seen below. With such a small sample size, it is imprudent to interpret the shape of the "curves" themselves; however, the area under the ROC curve (AUC) does provide a general scalar value representing expected performance. As AUC is a portion of the 1x1 area of the ROC plot, its value can theoretically lie between 0 and 1; however, all serious predictors will gain a value above 0.5, which is the predictive power of the coin toss. A useful statistical property of the AUC is its equivalence to the probability that the predictor will be correctly forecast a randomly chosen event.

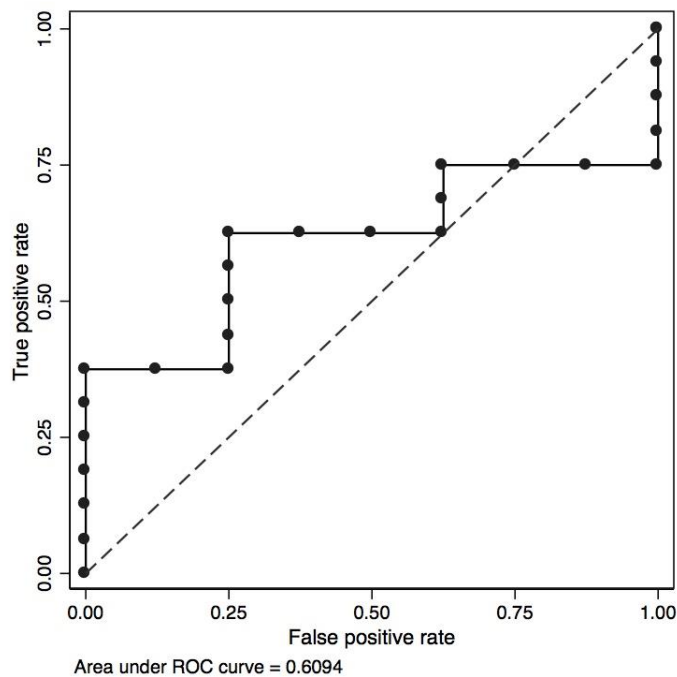


Figure A1 Dan Hotels [-3,0]

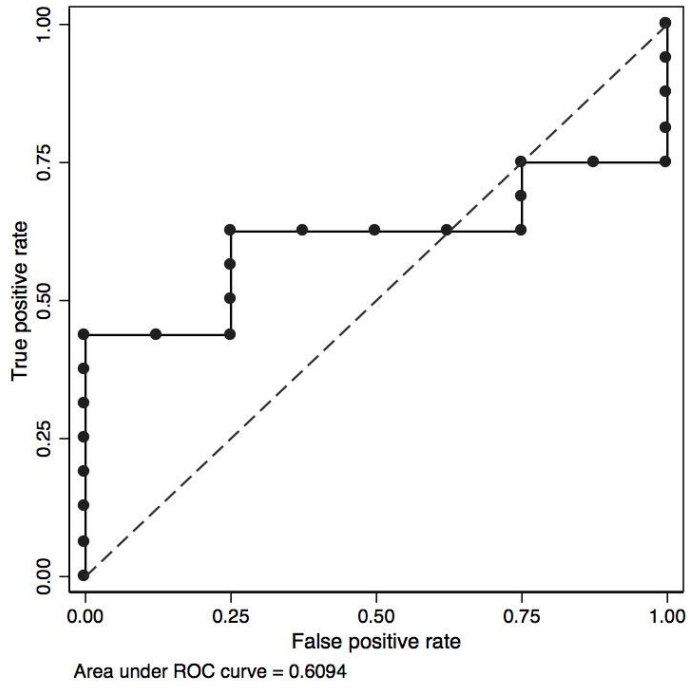


Figure A2. Dan Hotels [-5,0]

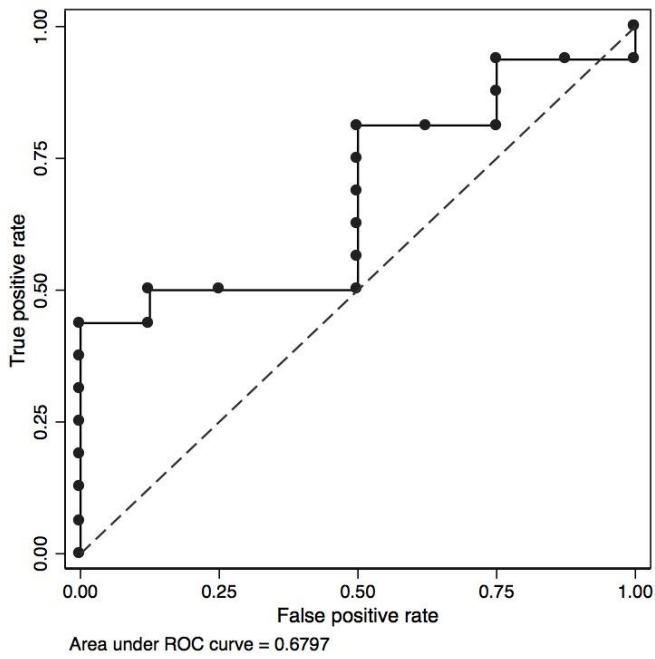


Figure A3. IMCO [-3,0]

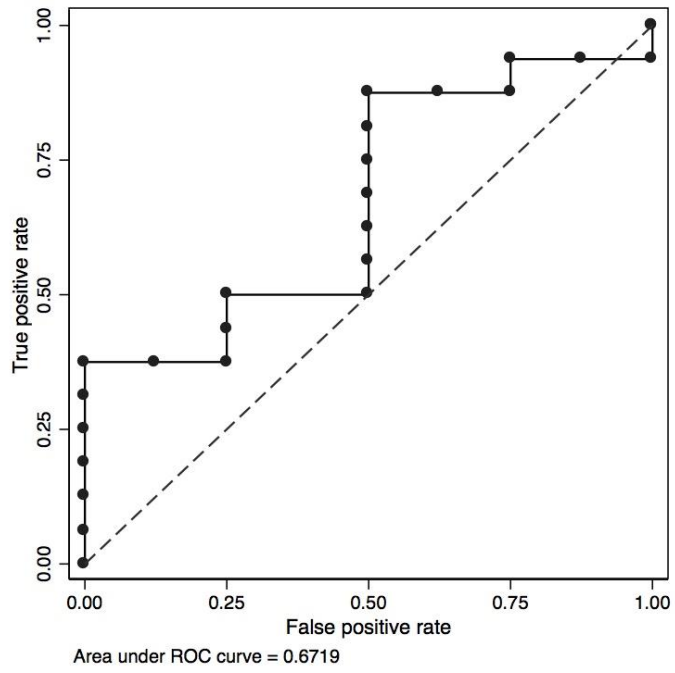


Figure A4. IMCO [-5,0]

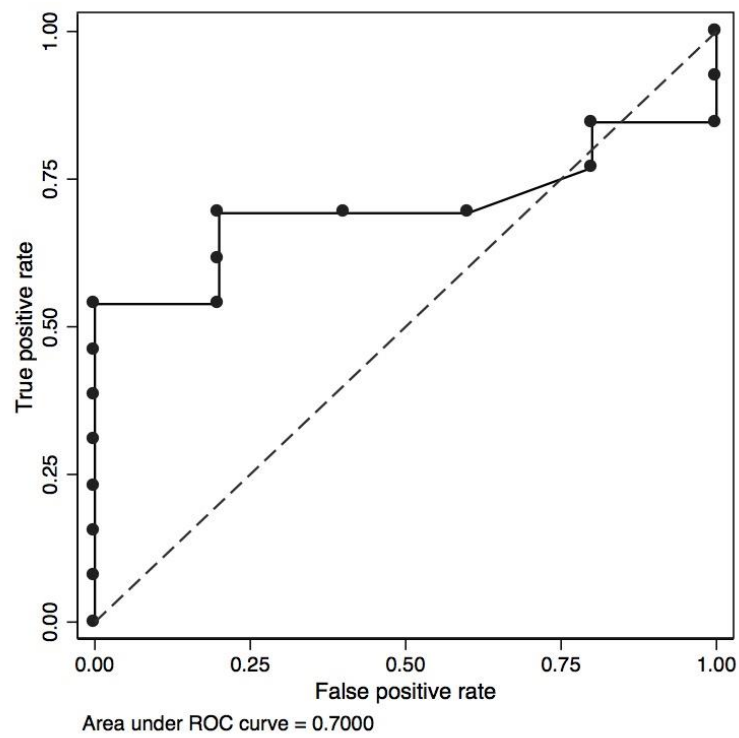


Figure A5. Haaretz

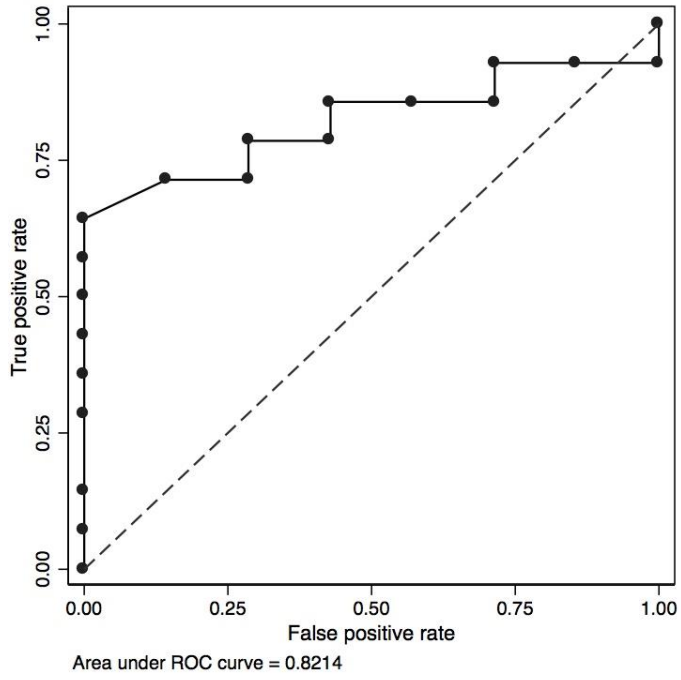


Figure A6. Jerusalem Post

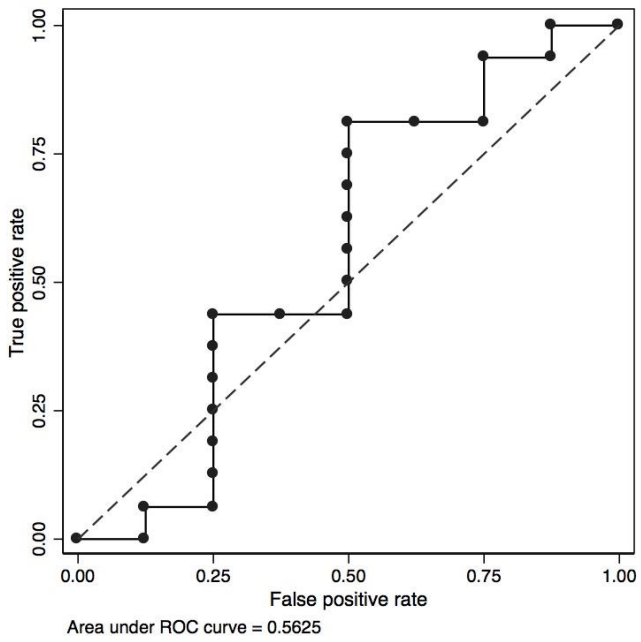


Figure A7. New York Times

Table A6 *Brier Scores calculation of all predictors (10 & 14 violent events threshold)*

Predictor	10 violent events	14 violent events
Dan hotels [-3,0] event window	0.2401	0.2183
Dan hotel [-5,0] event window	0.2367	0.2182
Imco [-3,0] event window	0.2488	0.2217
Imco [-5,0] event window	0.2490	0.2221
NYT	0.2492	0.2162
Jerusalem Post	0.2299	0.2670
Haaretz	0.3127	0.2492