VALUING PEACE:
THE EFFECTS OF FINANCIAL MARKET EXPOSURE ON VOTES AND POLITICAL ATTITUDES

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VALUING PEACE

1. Conflict costly. But making concessions for peace is also risky.

2. People have different personal exposure to risks and returns from conflict and peace, and may not internalize the gains from peace and risks faced by the country or region as a whole.

Can exposure to financial markets
-- that help individuals internalize the economic costs of conflict --
change individuals' attitudes towards war and peace
... and even their votes?

And can this happen even in the context of a persistent ethnic conflict?

In Israel, yes.

CAN EXPOSURE TO FINANCIAL MARKETS EFFECT INDIVIDUAL'S ATTITUDES TOWARDS PEACE AND EVEN THEIR VOTES?

- Trading
    - Endogenous in most observational data
        - both who invests and in what assets
    - Also hard to randomize, with real asset prices at scale, particularly for novices.
- Randomly assign 1345 likely Jewish voters to a specific financial asset. Encourage them to trade on our own online platform during a period of 4-7 weeks
    - Israeli stocks
    - Palestinian stocks
    - Voucher (tradable for stocks)
    - Control
- Outcomes: attitudes and votes
    - Main measure: vote in the March 2015 Israeli general elections
    - Other measures: self-reported attitudes towards peace deal

MAIN RESULT

- Exposure to incentives to trade in financial markets increases likelihood of voting for left parties (pro-peace initiatives) by 4-6 percentage points (relative to 25% vote share in control).
    - Similarly reduces probability for right parties by 4-5pp (relative to 36% vote share in control)

- Exposure also increases willingness to support the making of deals for peace and reduces opposition to specific costly concessions

- Effects persist (and even cumulate) one year later.

MECHANISM

Consistent with human capital formation: learning about both financial markets <u>and</u> the economic costs of conflict.
Direct evidence for:
- Increases in Financial Literacy (based upon standard test questions); (Self- reported) familiarity with the stock market
- (Persistent) Increases in Consumption of Financial News and knowledge of financial market performance.
- Increased evaluation of Benefits of a Peace Settlement to the Israeli Economy relative to status quo (particularly for the risk-averse)
- Political Effects stronger for ex ante <u>inexperienced </u>investors, who become like those experienced investors in their votes and political attitudes.

Find no evidence for, or can rule out other mechanisms, including:
- Direct Material Incentives.
- Wealth Effects/ Changes in Subjective Well-Being
- Change in Knowledge of Political Platforms / Facts
- Change in Overall Consumption or Slant of Non-Financial (Political) Media
- Short-term Attention/ Salience

Exposure to in-group vs out-group assets have similar overall political effects, but appear to operate through different learning channels.

SOME RELATED LITERATURES

First study to randomly assign financial assets, provide incentives to trade those assets and study effects on political behavior.

The Persistence of Ethnic Conflict/ Hatreds vs *Economic Complementarities and Ethnic Tolerance*

Lots, eg. Voigtlander & Voth *QJE 2013*, Shayo & Zussman *QJE 2011*, Sambanis and Shayo *APSR 2013*, Besley & Reynal-Querol *APSR 2014*, Montesquieu 1748, Hirschman 1977, Polachek & Sieglie 2006, Martin, Mayer & Thoenig *ReStud 2008*, Jha *APSR 2013*, Jha *JEBO 2014*, Diaz-Cayeros & Jha 2016

Financial Inclusion and Literacy [and the Gender Gap]

eg Microfinance (lots), *Bursztyn et al ECMA 2015, Lusardi and Mitchell JEL 2014,* Van Rooij et al *JFinE 2011*, Bucher-Koenen et al *NBER 2014*, Hastings et al *Ann Rev Econ 2014, Carpena et al 2015*

Conflict as Bargaining Failures/ the Political Coase Theorem

eg Acemoglu & Robinson *AER 2000,* Fearon 1996 and related literature.

"SWORDS INTO BANK SHARES": FINANCIAL SOLUTIONS TO THE THREAT OF POLITICAL VIOLENCE

source: Last Samurai, 2003

Theory + empirics to document how financial innovations which allow the risks and returns of human capital/ ethnicity to be shared have aligned incentives in favor of peace + broader reforms.

1. Britain (C17): merchants and non-merchants => JSCs=> representative government, peace *(Jha QJE 2015)*
2. US (1790s): veterans, bank speculators and politicians => lowered political risk *(Jha, in progress)*
3. Japan (1876-77): 1.8M samurai and non-samurai => 80% Bonds/ National Banks=> peace
(Jha, Mitchener and Takashima, in progress)
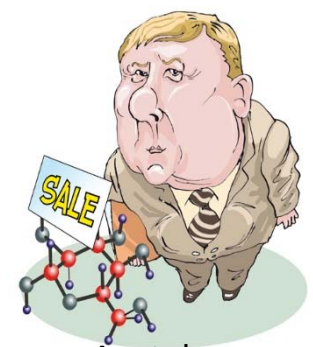

Shibusawa Eiichi, Founder, Dai-Ichi Bank, in 1876 (left), and 1877 (right)

Alexander.   Masayoshi.   Anatoly.

But can financial innovations mitigate <u>contemporary</u> ethnic conflict? *(Jha, World Financial Review 2013)*

EXPERIMENTAL DESIGN

Population: Jewish Israeli citizens that participate in a large internet panel

>~60,000 internet panel, nationally representative in terms of age and sex. Commonly used for commercial market research, political opinion polling and academic studies.
>
>Not a lot of super-rich (but effects similar for both rich and poor).

Invited to a study on investor behavior

>Consent; complete baseline survey
>
>Enter a lottery to win financial assets that track Israeli and foreign stocks from the region.
>
>If wins: notified on asset allocation and quizzed on understanding rules

בטבלה הבאה מופיעה הרשימה המלאה של הנכסים הפיננסיים שישתתפו במחקר. הרשימה כוללת גם <u>מניות של חברות מסוימות</u> וגם <u>מדדים</u> (index funds).

- המניות כוללות בנקים וחברות תקשורת.
- המדדים עוקבים אחר הערך של כמה מהחברות הציבוריות הגדולות בכל מדינה (בדרך כלל מדד מסוים כולל בין 20 ל-30 חברות).

שימו לב במיוחד לנכס שבו זכית ולמספר המניות שברשותך. אותו מספר המניות יעמוד לרשותך גם בשבוע הבא. לפיכך, אם המחיר של הנכס יעלה - ערך הנכסים שלך יעלה בהתאם. אם המחיר של הנכס יירד - ערך הנכסים שלך יירד בהתאם.
הרשימה מסודרת בסדר אלפביתי לפי סימול המניה או המדד באנגלית.

• Here is a list of all the assets participating…
• Both company stocks and index funds (explained).

• Note the asset you won and the # of shares you own.
• If the price of your asset increases, the value of your assets will increase accordingly. If the price goes down…

total value in NIS | total value in JOD | # shares | current price in JOD

ערך הנכסים שלי (בש"ח)	ערך הנכסים שלי (כמטבע מקומי)	מספר המניות שברשותי	מחיר הנכס היום (במטבע מקומי)	מטבע	סימול	שם באנגלית	שם
			8.55	TRY	AKBNK	Akbank Turkey	בנק אקבנק, טורקיה
			2,186.18	JOD	AMGNRLX	Amman SE General Index Fund	מדד של בורסת רבת עמון בירדן
			663.10	ILS	BEZQ	Bezeq	בזק (חברת תקשורת ישראלית)
			2.80	JOD	BOJX	Bank Of Jordan	בנק ירדן
			2.78	JOD	BOP	Bank Of Palestine	בנק פלסטין
			44.44	EURO	CYFT	Cyprus/FTSE Top 20 Index Fund	מדד של 20 המניות הגדולות בקפריסין
				EGP	EGX30	Egypt EGX 30 Index Fund	מדד של 30 המניות הגדולות בבורסת קהיר במצרים
				EGP	ETEL	Telecom Egypt	מצרים טלקום
			3.36	JOD	JTEL	Jordan Telecom	ירדן טלקום
			1,288.00	ILS	LUMI	Bank Leumi	בנק לאומי לישראל
200	36.36	6.122	5.94	JOD	PALTEL	Palestine Telecommunications	פלסטין טלקומיוניקיישן (חברת תקשורת פלסטינית)
			504.76	JOD	PLE	Palestine Stock Exchange Index Fund	מדד של הבורסה הפלסטינית בשכם
			1,452.46	ILS	TA25	Tel Aviv TA-25 Index Fund	מדד תל-אביב 25
			14.80	TRY	TCELL	Turkcell	טורקסל (חברת תקשורת טורקית)
			5.90	EGP	UNBE	Union National Bank of Egypt	בנק יוניון הלאומי של מצרים
			106,359.21	TRY	XU030	Borsa Istanbul 30 Index Fund	מדד של 30 המניות הגדולות בבורסת איסטנבול בטורקיה
			1.00	ILS	CASH		כסף מזומן

לקבלת מידע מפורט ועדכני על כל אחד מהנכסים הנ"ל, באפשרותך להקליד את הסימול של אותו נכס באתר http://il.investing.com, או באתרים של הבורסות השונות.

EXPERIMENTAL DESIGN, cont.d

Two parallel sets of surveys:

      Weekly financial surveys

            Informed of performance; enter trading decisions.

      Social/political surveys and an information survey.

Participants did not know that the social surveys were linked to the financial surveys

      They were among many survey invitations they received over this period from a variety of different anonymous sources.

      Participating company stocks not exceptionally related to politics or the conflict (banks and telecoms)

      How can we verify this?

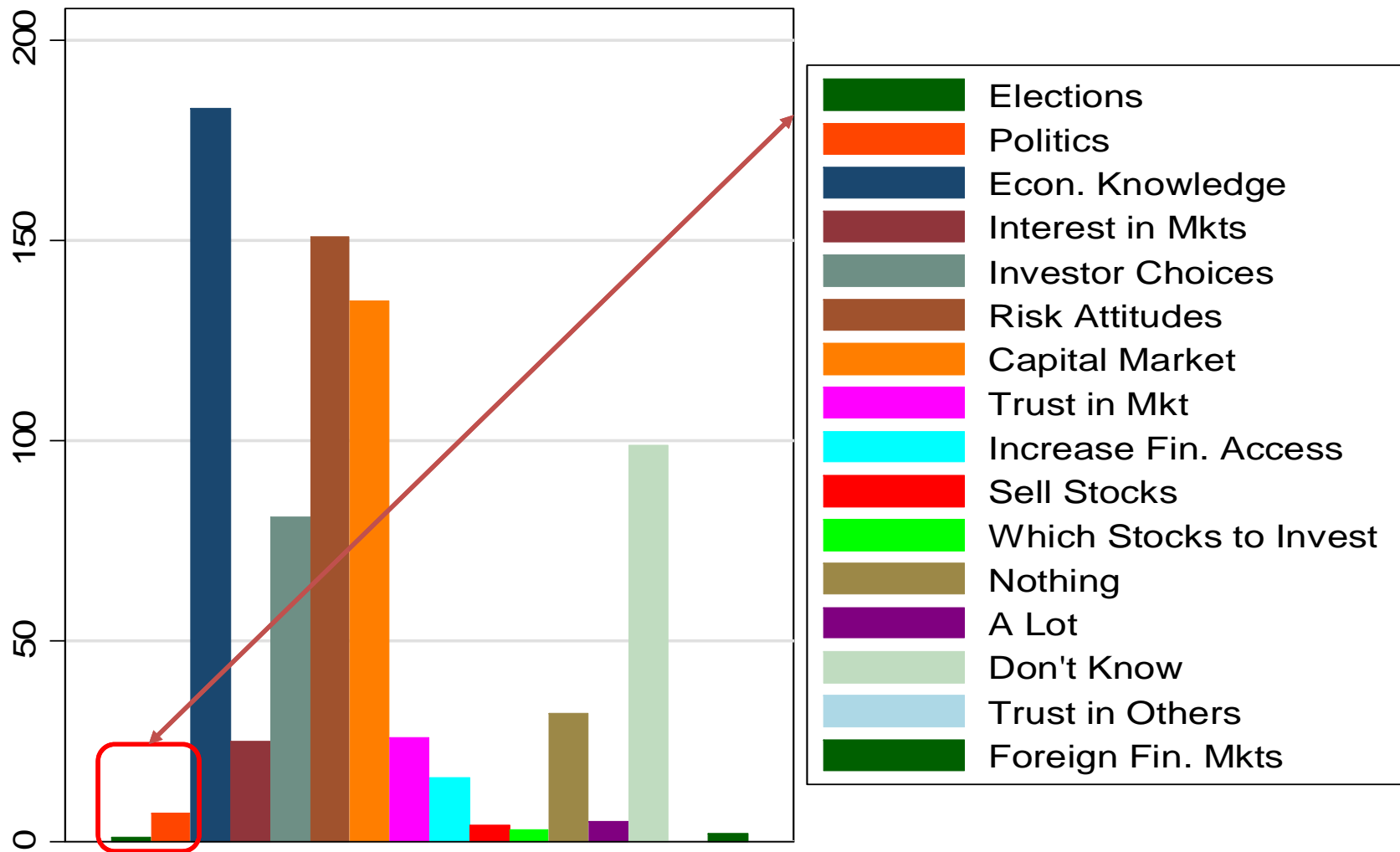# OPEN QUESTIONS (FINAL FINANCIAL SURVEY)

"To conclude, we would appreciate it if you could share your thoughts about this study.
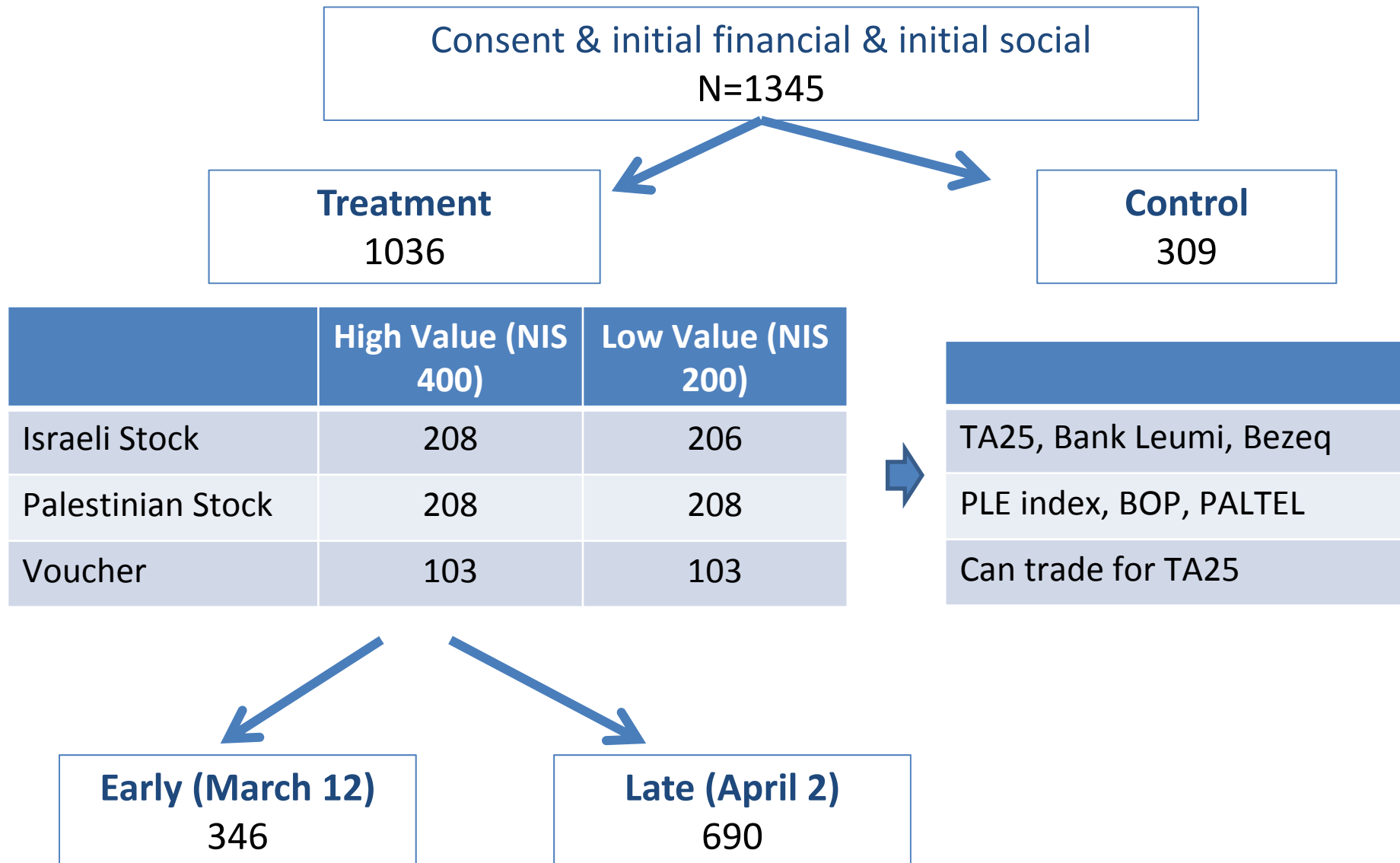
1. *What have you learned during this study?*

2. *What do you think the researchers can learn from this study?*

3. *If you have other comments or suggestions – we would love to hear!"*

WHAT CAN THE RESEARCHERS LEARN FROM THE STUDY?

(SUB-) TREATMENTS

Consent & initial financial & initial social
N=1345

Treatment	Control
1036	309

	High Value (NIS 400)	Low Value (NIS 200)
Israeli Stock	208	206
Palestinian Stock	208	208
Voucher	103	103

TA25, Bank Leumi, Bezeq
PLE index, BOP, PALTEL
Can trade for TA25

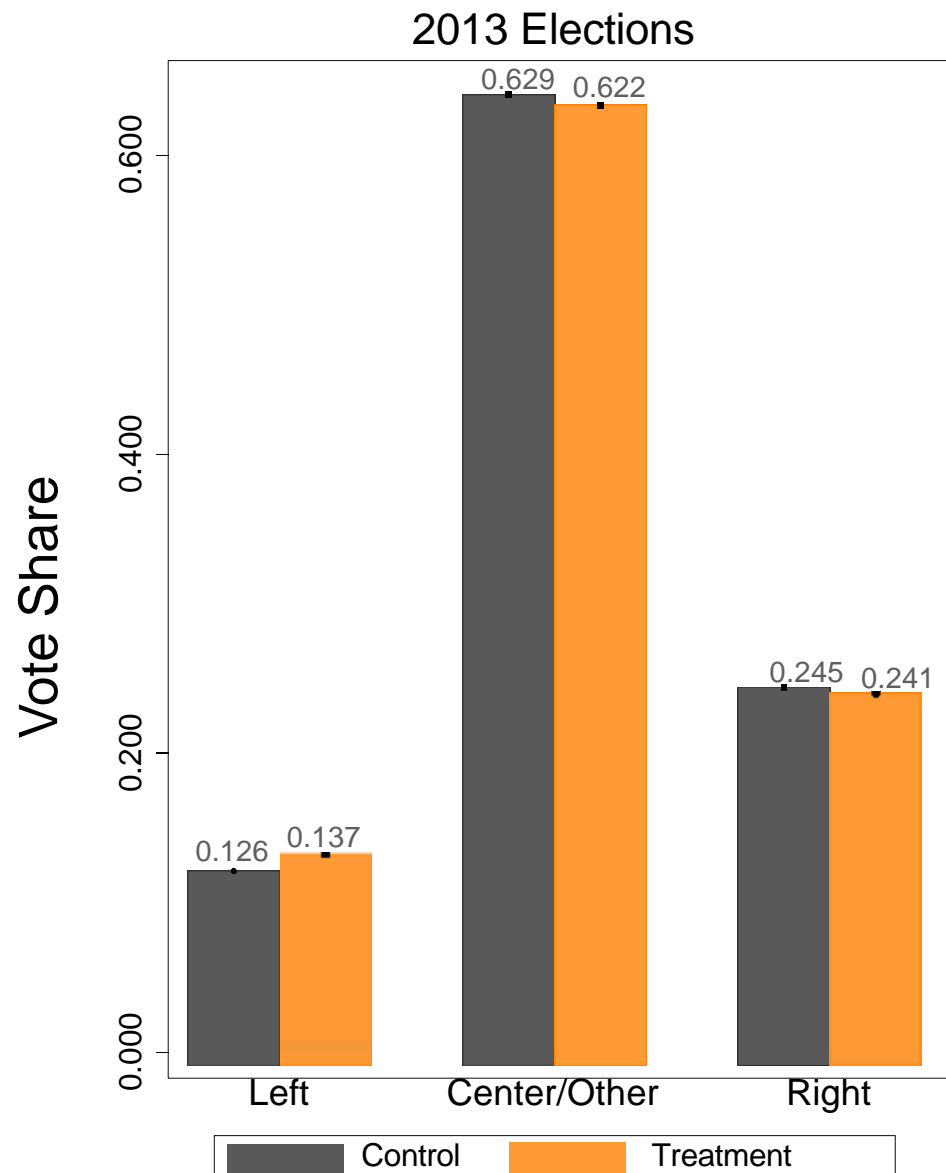| Early (March 12)	Late (April 2)
346	690

- Treatment Group: weekly trades of 10% of portfolio.
  - Stock treatments can sell (and later buy back)
  - Voucher treatment can buy TA25 (and later sell)
    - Even if traded out every week, portfolio has more than 60% in the assigned asset
  - Trade when markets closed (Thurs-Sun): prices constant and easily verifiable
- Incentives for engagement:
  - If don't enter a weekly decision, lose the 10%.
    - OK to decide not to buy nor sell
  - No commission
  - Questions on 3 year past performance and on forecasts.
- Exposure to post-treatment price changes also exogenous since assignment to asset was random.
  - Better performance likely to increase stock market participation (Malmendier & Nagel *QJE 2008*).

VERY LITTLE ATTRITION IN MAIN OUTCOMES

	Asset treatment	Control
Initial assignment	1036	309
Observed vote in March 2015 elections	1009	302
Proportion observed	0.974	0.977
Observed peace deal attitudes, March 2015	985	292
Proportion observed	0.951	0.945
Observed economic attitudes, July 2015	854	257
Proportion observed	0.824	0.832
Observed vote intention, April 2016	731	207
Proportion observed	0.706	0.670

2013 Elections

Vote Share

- Left: Control 0.126, Treatment 0.137
- Center/Other: Control 0.629, Treatment 0.622
- Right: Control 0.245, Treatment 0.241

Legend: Control, Treatment
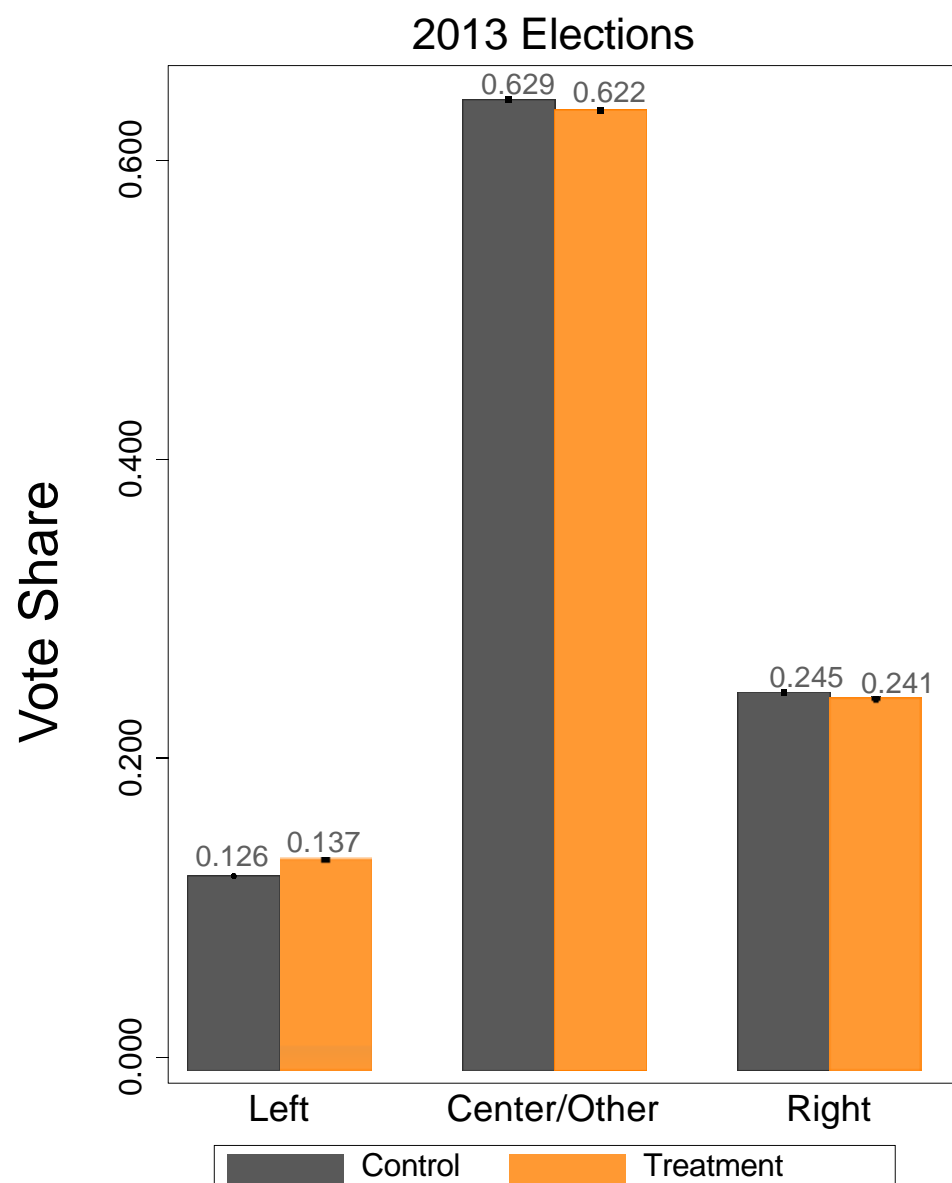
Note:
1) Balance
2) Swing Voters x2

N=1311. The center bars include 71 and 20 individuals who voted for for 'other' parties in 2013 and 2015, respectively, as well as 1 and 27 individuals who did not vote in 2013 and 2015, respectively.
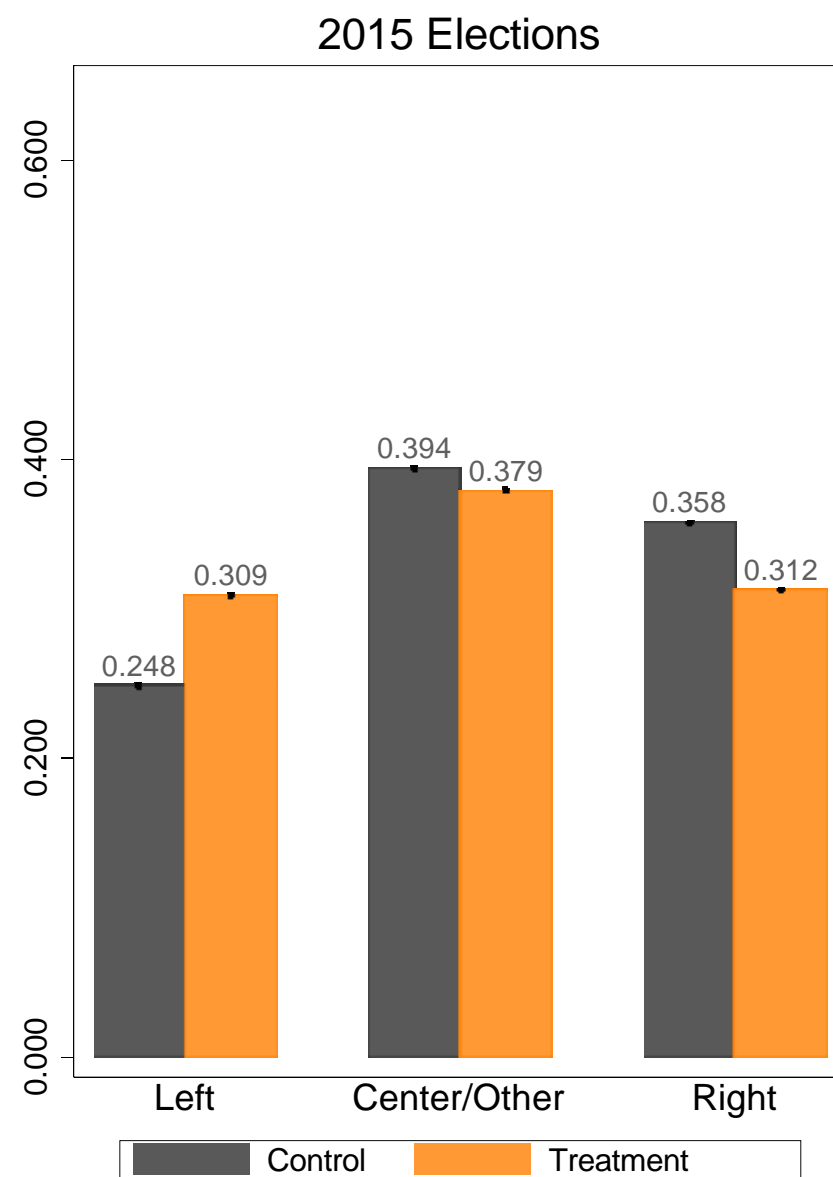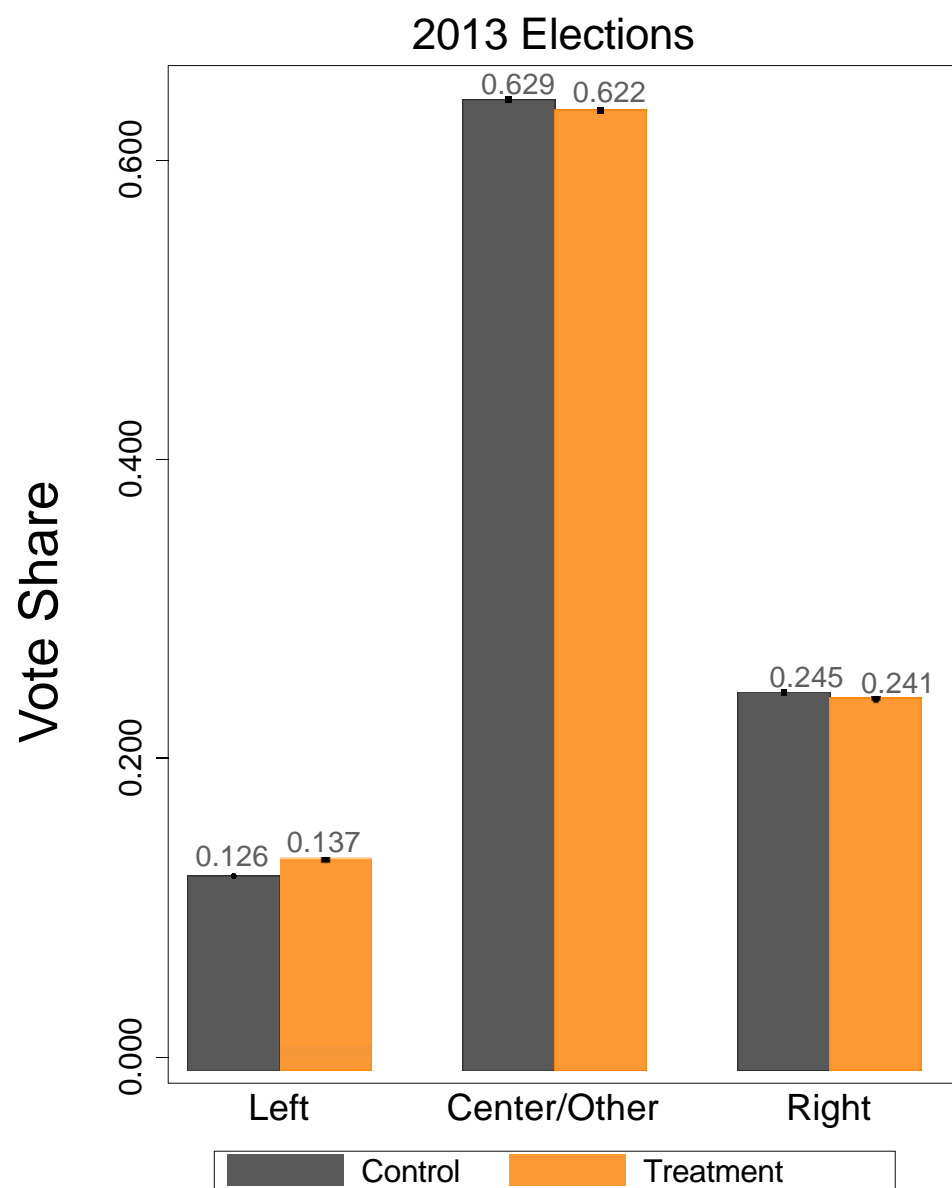
BALANCE / SUMMARY STATISTICS	Treatment Mean	Control Mean	Diff. (No FE)	P-value	Diff. (Strata FE)	P-value	Observations
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Voted Right '13	0.241	0.245	-0.004	0.881	0.000	0.964	1,311
	[0.428]	[0.431]	(0.028)		(0.006)		
Voted Left '13	0.137	0.126	0.011	0.625	0.005	0.213	1,311
	[0.344]	[0.332]	(0.022)		(0.004)		
Peace Index	0.051	0.004	0.047	0.378	0.038	0.399	1,311
	[0.823]	[0.784]	(0.053)		(0.044)		
Economic Policy Index	0.007	-0.005	0.012	0.757	0.011	0.752	1,311
	[0.574]	[0.596]	(0.038)		(0.036)		
Bought/Sold Shares in Last 6 Mths [0/1]	0.355	0.368	-0.013	0.686	-0.018	0.290	1,311
	[0.479]	[0.483]	(0.031)		(0.017)		
Male	0.521	0.513	0.008	0.806	0.009	0.470	1,311
	[0.5]	[0.501]	(0.033)		(0.012)		
Age [Yrs]	39.289	41.530	-2.240	0.012	-2.142	0.011	1,311
	[13.394]	[14.293]	(0.892)		(0.844)		
Post Secondary Education	0.230	0.232	-0.002	0.946	0.002	0.953	1,311
	[0.421]	[0.423]	(0.028)		(0.027)		
BA Student	0.148	0.152	-0.005	0.842	-0.005	0.834	1,311
	[0.355]	[0.36]	(0.023)		(0.024)		
BA Graduate and Above	0.426	0.427	-0.001	0.976	-0.005	0.860	1,311
	[0.495]	[0.495]	(0.032)		(0.031)		
Married	0.598	0.629	-0.032	0.326	-0.033	0.295	1,311
	[0.491]	[0.484]	(0.032)		(0.031)		
Religiosity: Secular	0.627	0.636	-0.008	0.791	-0.014	0.582	1,311
	[0.484]	[0.482]	(0.032)		(0.025)		
Traditional	0.164	0.172	-0.009	0.723	-0.005	0.823	1,311
	[0.37]	[0.378]	(0.024)		(0.024)		
Religious	0.124	0.119	0.005	0.828	0.005	0.780	1,311
	[0.33]	[0.325]	(0.022)		(0.018)		
Ultra-Orthodox	0.085	0.073	0.012	0.493	0.014	0.222	1,311
	[0.279]	[0.26]	(0.018)		(0.012)		
Monthly Family Income [NIS]+	10996	11162	-165.192	0.651	-231.199	0.511	1,286
	[5.567]	[5.324]	(365.176)		(352.004)		
Willing to Take Risks [1-10]	4.716	4.344	0.371	0.012	0.366	0.009	1,311
	[2.265]	[2.24]	(0.148)		(0.139)		
Time preference median or above	0.657	0.642	0.015	0.638	0.014	0.645	1,311
	[0.475]	[0.48]	(0.031)		(0.031)		
Financial literacy: % correct	70.664	69.726	0.938	0.543	0.870	0.550	1,311
	[23.359]	[23.917]	(1.541)		(1.455)		

MAIN RESULT

- Exposure to incentives to trade in financial markets increases likelihood of voting for left parties (pro-peace initiatives) by 4-6 percentage points (relative to 25% vote share in control).
    - Similarly reduces probability for right parties by 4-5pp (relative to 36% vote share in control)

- Exposure also increases support for peace deals and reduces opposition to specific concessions

- Effects persist (and even cumulate) one year later.

2013 Elections

N=1311. The center bars include 71 and 20 individuals who voted for for 'other' parties in 2013 and 2015, respectively, as well as 1 and 27 individuals who did not vote in 2013 and 2015, respectively.

2013 Elections

Vote Share

- Left: Control 0.126, Treatment 0.137
- Center/Other: Control 0.629, Treatment 0.622
- Right: Control 0.245, Treatment 0.241

Control | Treatment

2015 Elections

- Left: Control 0.248, Treatment 0.309
- Center/Other: Control 0.394, Treatment 0.379
- Right: Control 0.358, Treatment 0.312

Control | Treatment

N=1311. The center bars include 71 and 20 individuals who voted for for 'other' parties in 2013 and 2015, respectively, as well as 1 and 27 individuals who did not vote in 2013 and 2015, respectively.

ECONOMETRIC ANALYSIS

- Intent To Treat (ITT) Estimates (conservative)

Sequentially:

  - No controls
  - Strata (104 blocks of 13) (2013 vote, sex, traded stocks, geographical region, discrepancies, risk aversion).
    + Demographics and preferences
        (measured pre-treatment)
  - sex, age(^{2}), education categories, 4 religiosity categories, 7 regions, 5 income categories, married, willingness to take risks (1-10), patience, financial literacy score.

- Re-weighted estimates to reduce weight on swing voters and match actual 2013 Jewish vote shares
- IV-- Treatment Effect On Treated (TOT)

BASIC RESULT

	Vote for Left Party in 2015				Vote for Right Party in 2015			
	ITT	ITT	ITT (reweighted)	TOT	ITT	ITT	ITT (reweighted)	TOT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Asset Treatment	0.061	0.059	0.043	0.073	-0.045	-0.044	-0.051	-0.054
	(0.029)	(0.023)	(0.020)	(0.029)	(0.031)	(0.024)	(0.027)	(0.029)
Voted Right '13		-0.254	-0.201	-0.272		0.492	0.473	0.505
		(0.091)	(0.083)	(0.094)		(0.122)	(0.127)	(0.120)
Voted Left '13		0.596	0.614	0.608		-0.222	-0.249	-0.231
		(0.091)	(0.090)	(0.090)		(0.088)	(0.088)	(0.092)
Bought/Sold Shares in		0.018	0.015	0.015		0.030	0.024	0.032
Last 6 Mths [0/1]		(0.040)	(0.035)	(0.041)		(0.040)	(0.043)	(0.041)
Traditional		-0.138	-0.155	-0.133		0.102	0.128	0.099
		(0.032)	(0.029)	(0.033)		(0.032)	(0.036)	(0.032)
Religious		-0.166	-0.162	-0.165		0.241	0.232	0.240
		(0.032)	(0.031)	(0.032)		(0.049)	(0.049)	(0.049)
Ultra-Orthodox		-0.221	-0.208	-0.222		0.056	0.033	0.057
		(0.039)	(0.037)	(0.040)		(0.086)	(0.088)	(0.086)
Post Secondary		0.068	0.063	0.066		-0.060	-0.046	-0.059
		(0.033)	(0.027)	(0.033)		(0.034)	(0.037)	(0.034)
BA Student		0.088	0.072	0.088		-0.041	-0.025	-0.041
		(0.038)	(0.032)	(0.039)		(0.039)	(0.042)	(0.039)
BA Graduate and		0.062	0.038	0.062		-0.044	-0.021	-0.045
		(0.030)	(0.026)	(0.030)		(0.032)	(0.035)	(0.032)
Willing to Take Risks		-0.001	0.002	-0.001		0.007	0.008	0.007
[1-10]		(0.005)	(0.004)	(0.005)		(0.005)	(0.005)	(0.005)
Time preference above		0.012	0.009	0.010		0.004	0.004	0.005
median		(0.022)	(0.018)	(0.022)		(0.021)	(0.024)	(0.021)
Financial Literacy,		0.000	0.000	0.000		-0.001	-0.001	-0.001
%Correct		(0.000)	(0.000)	(0.000)		(0.001)	(0.001)	(0.001)
Strata FE	NO	YES	YES	YES	NO	YES	YES	YES
Demographic Controls	NO	YES	YES	YES	NO	YES	YES	YES
Observations	1,311	1,311	1,311	1,311	1,311	1,311	1,311	1,311
R-squared	0.003	0.447	0.570	0.443	0.002	0.518	0.556	0.518

EFFECT ALIGNS VOTE CHOICES OF THE INEXPERIENCED WITH EXPERIENCED.

	Vote for Left Party in 2015			Vote for Right Party in 2015		
	ITT	ITT reweighted	TOT	ITT	ITT reweighted	TOT
	(1)	(2)	(3)	(4)	(5)	(6)
Bought/Sold Shares in Last 6 Mths	0.096 (0.045)	0.097 (0.038)	0.100 (0.046)	-0.002 (0.047)	-0.013 (0.055)	-0.004 (0.047)
Asset Treatment	0.018 (0.043)	0.003 (0.036)	0.022 (0.050)	-0.042 (0.040)	-0.059 (0.049)	-0.049 (0.047)
Asset Treat x Inexperienced	0.070 (0.051)	0.071 (0.043)	0.090 (0.061)	-0.002 (0.050)	0.013 (0.059)	-0.007 (0.060)
Strata FE	NO	NO	NO	NO	NO	NO
Demographic Controls	YES	YES	YES	YES	YES	YES
Observations	1,311	1,311	1,311	1,311	1,311	1,311
R-squared	0.354	0.492	0.349	0.453	0.491	0.453

DID THEY UNDO THE TREATMENT?
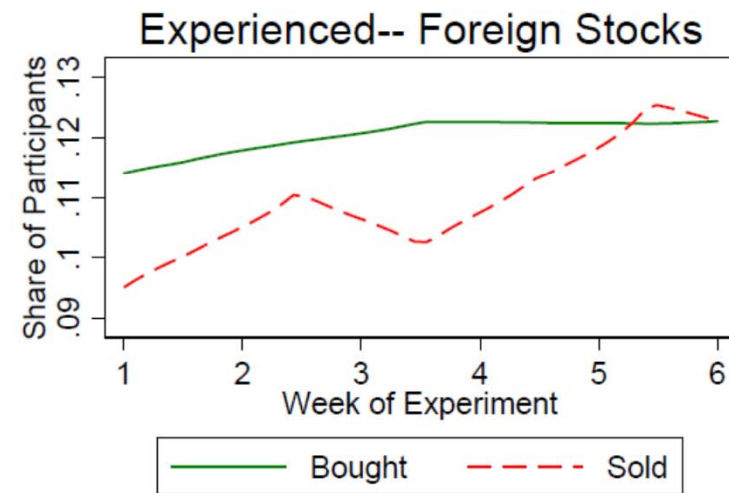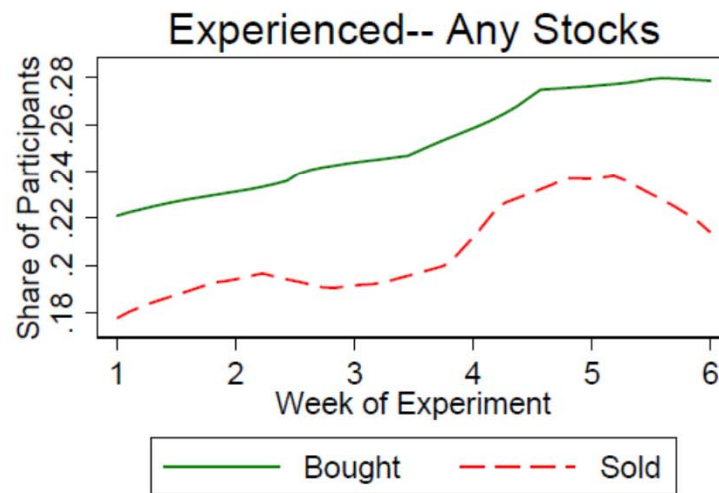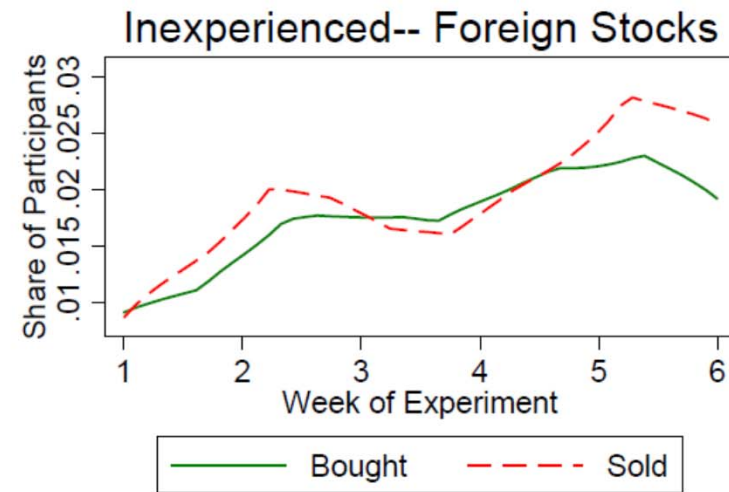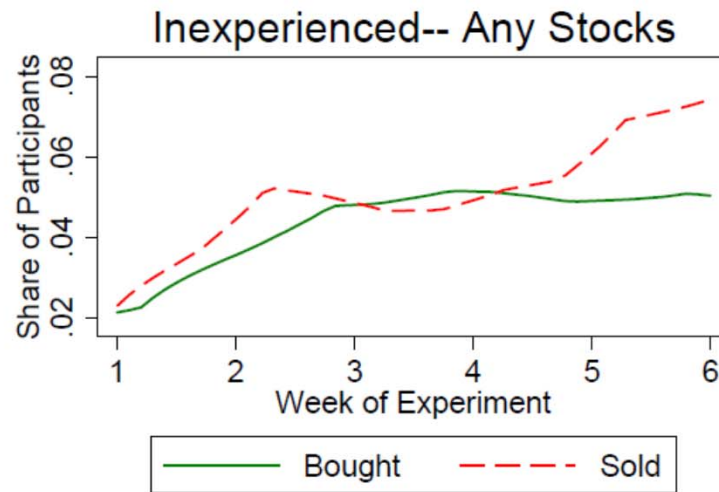
ONE OUTCOME: ONE TREATMENT --- ORDERED VOTE CHOICE
(0 (Right) 0.5 (Center) 1 (Left))

	Ordered Logit		OLS		IV-2SLS
	ITT	ITT re-weighted	ITT	ITT re-weighted	TOT
	(1)	(2)	(3)	(4)	(5)
A. Full sample (N=1311)					
Asset Treatment	1.494	1.472	0.052	0.047	0.064
	(0.233)	(0.254)	(0.019)	(0.019)	(0.022)
R-squared/ Pseudo R2	0.369	0.434	0.549	0.627	0.546
Strata FE	YES	YES	YES	YES	YES
Demographic Controls	YES	YES	YES	YES	YES

DIFFERENCE- IN- DIFFERENCE ON ORDERED VOTE CHOICE

N=1311 x 2 waves.	ITT	ITT	ITT	ITT re-weighted	TOT
	(1)	(2)	(3)	(4)	(5)
Asset Treatment x 2015	0.046	0.046	0.046	0.045	0.055
	(0.020)	(0.021)	(0.020)	(0.021)	(0.025)
Asset Treatment	0.008	0.004			
	(0.020)	(0.007)			
2015	0.005	0.005	0.005	-0.014	0.005
	(0.018)	(0.018)	(0.018)	(0.019)	(0.018)
Individual FE	NO	NO	YES	YES	YES
Demographic Controls	NO	YES	NO	NO	NO
R-squared	0.005	0.649	0.805	0.848	0.805

Notes : This table provides OLS (ITT) (Cols 1-4) and 2SLS (TOT) (Col 5) estimates of the difference in the difference in ordered vote choice between individuals in the asset treatment group and control group over two waves: 2013 and 2015. Standard errors are clustered at the individual level (in parentheses). *2015* is a dummy for 2015. Col 2 includes the full set of controls from Table 2, Col 2, while Cols 3-5 include individual fixed effects. Col 4 re-weights the sample to match the party shares of the Jewish vote in 2013.

Mechanism

Material Incentives?

No:
1. Pre-Election !< Post
2. Voucher !< Stock
3. (IV) Holdings on Election Day x

Δ Policy Preferences?

Yes:
Peace Index ✎
Econ Policy Index x, ☞

**Short-Term Attention /
Cog. Costs /
Cog. Dissonance?**

No

**Overcoming Fixed Cost
Barriers to Learning**

Yes: Effects on Vote, Peace
Index, and Financial News
**persist, and even
cumulate 1 year later.**

Why?

Wealth Effect/ Mood/ Affect?

No:
1) Sums are small, and EPI ☞
2) High End. ~ Low End.
3) Effects on Poor ~ Rich
4) **Δ** Subjective Well-Being x

Human Capital / Learning?

Yes: Familiarity,
Financial Literacy ✎
Reassessment of
Relative Benefits of
Peace to Economy.

Status Quo ✎?

Which Risks?

Peace Process ♀?

Yes:
effects
greater
on risk
averse

No

**Political Information/
Media Slant?**

No:
1. Knowledge Tests similar
2. Follow Same Non-Financial News

How?

**Engagement with Financial
Markets**

Yes: Follow Stock Mkts,
Financial News.

DOES THE EFFECT REFLECT MATERIAL INCENTIVES?	OLS	OLS	OLS	2SLS
Ordered Vote Choice: N= 1311	(1)	(2)	(3)	(4)
Asset Treatment	0.052	0.077	0.045	0.059
	(0.019)	(0.022)	(0.019)	(0.020)
Divest After Election		-0.039		
		(0.019)		
Voucher Treatment			0.033	
			(0.022)	
Stock Value on Election Day (100s NIS)				-0.006
				(0.007)
Strata FE	YES	YES	YES	YES
Demographic Controls	YES	YES	YES	YES
R-squared	0.549	0.550	0.550	0.549

Notes: This table provides estimates of the effect of determinants of stockholdings on election day on an individual's vote choice ordered from Right (0), Center/Other (0.5) to Left (1). These determinants include whether an agent was divested after the elections (Col 2) and was initially assigned stocks vs Voucher (Col 3). Col 4 provides IV-2SLS estimates, instrumenting for the stock value on election day using the stock value of a purely passive investor who made no trades. The instrument is calculated based on the asset allocation, the redemption date (pre- or post- elections), the initial value (high or low) and the price change of the specific asset by election day. Robust standard errors in parentheses.

REALIZED LOSSES HAVE A BIGGER EFFECT THAN PAPER LOSSES.
(consistent with increases in risk aversion– Imas 2016)

	Full Sample			Risk Averse
	OLS	OLS	OLS	OLS
	(1)	(2)	(5)	(7)
Treatment	0.052	0.038		
	(0.019)	(0.020)		
Divest Before Election		0.039		
		(0.019)		
Divest Before x 1(Price Gain by Mar. 12)			0.067	0.088
			(0.027)	(0.033)
Divest Before x 1(Price Loss by Mar. 12)			0.084	0.126
			(0.029)	(0.039)
Divest After x 1(Price Gain by Mar. 12)			0.055	0.073
			(0.023)	(0.030)
Divest After x 1(Price Loss by Mar. 12)			0.005	0.006
			(0.024)	(0.032)
Strata FE	YES	YES	YES	YES
Demographic Controls	YES	YES	YES	YES
R-squared	0.549	0.55	0.553	0.574
Observations	1,311	1,311	1,311	817

DO POLICY PREFS CHANGE?: PEACE CONCESSIONS [March 17] vs ECON POLICY [Jul 15]	*Full Sample*				*Inexperienced*		
	Mean [SD]	Treatment Effect	Obs.	R^2 / Pseudo R^2	Treatment Effect	Obs.	R^2 / Pseudo R^2
	(1)	(2	(3)	(4)	(5)	(6)	(7)
Indices (OLS) Peace Index	0.066 [0.833]	0.110 (0.044)	1,277	0.455	0.157 (0.054)	819	0.479
Economic Policy Index	-0.019 [0.598]	-0.026 (0.041)	1,111	0.210	-0.104 (0.054)	697	0.209

Specific Outcomes (ordered probits): Extent that you agree / disagree with following criteria for solving the conflict between Israelis and Palestinians [1- Disagree, 4- Agree]

Two states for two peoples	2.522 [1.140]	0.101 (0.079)	1,277	0.231	0.230 (0.102)	819	0.265
1967 borders with a possibility of land exchanges	2.164 [1.083]	0.164 (0.079)	1,277	0.213	0.278 (0.102)	819	0.238
Jerusalem will be split into two separate cities - Arab and Jewish	1.822 [1.039]	0.189 (0.086)	1,277	0.206	0.213 (0.110)	819	0.238
Palestinian refugees will get compensation & allowed to return to Palestine only	2.135 [1.075]	0.194 (0.077)	1,277	0.079	0.262 (0.099)	819	0.084
Incomes in Israel should be made more equal (vs. need larger diffs as incentives).[1-10]	4.249 [2.302]	-0.009 (0.076)	1,110	0.044	-0.057 (0.102)	697	0.050
Services and industries should be owned by the Government (vs. privatized). [1-10]	4.530 [2.429]	0.033 (0.073)	1,111	0.052	-0.037 (0.097)	697	0.070
Government responsible for helping the poor (vs. people should take care of themselves). [1-10]	3.299 [2.087]	-0.162 (0.077)	1,110	0.052	-0.291 (0.101)	696	0.062
Oppose reducing capital gains tax on investments in the stock market (vs. Support). [1-10]	2.652 [0.999]	0.053 (0.080)	1,104	0.073	-0.029 (0.107)	692	0.076

WEALTH EFFECT?	Ordered Vote Choice		Peace Index		Econ. Policy Index	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.053	0.044	0.104	0.083	-0.017	-0.003
	(0.025)	(0.021)	(0.058)	(0.049)	(0.052)	(0.047)
Below Avg Income	0.001		-0.052		0.175	
	(0.035)		(0.089)		(0.081)	
Treatment x Below Avg I	-0.004		0.014		-0.028	
	(0.039)		(0.094)		(0.089)	
High Allocation		0.016		0.055		-0.045
		(0.018)		(0.042)		(0.040)
Strata FE	YES	YES	YES	YES	YES	YES
Demographic Controls	YES	YES	YES	YES	YES	YES
Observations	1,311	1,311	1,277	1,277	1,111	1,111
R-squared	0.547	0.549	0.454	0.455	0.207	0.211

Notes: Dependent variables are individual vote choice, ordered from Right (0), Center/Other (0.5), to Left (1); the Peace Index; and the Economic Policy Index. Higher values of the indices imply greater support for peace negotiations and for redistributive policies, respectively. See Table 6. Robust standard errors in parentheses. The table reports the coefficient on the asset treatment, a dummy for whether an individual had household income below the Israeli average, the interaction with the asset treatment (Col 1,3,5), and a dummy for whether an individual received a high allocation of 400 NIS in assets vs 200 NIS. All regressions include strata fixed effects and the full set of controls from Table 2, Col 2.

AFFECT / SUBJECTIVE WELL-BEING?

|	Mean	SD	All		Inexperienced	
			Treatment Effect	SE	Treatment Effect	SE
Subjective Well Being Index (OLS)	0.026	[0.727]	0.011	(0.047)	-0.030	(0.060)
Specific Outcomes (Ordered Probits):						
Overall, how satisfied are you with your life? [1-4]	3.057	[0.661]	-0.023	(0.079)	-0.061	(0.101)
On a scale from 0 to 10, how would you rate…						
The overall well-being of you and your family	6.492	[2.100]	0.048	(0.072)	0.026	(0.091)
The happiness of your family	7.618	[1.885]	-0.010	(0.072)	-0.034	(0.094)
Your health	7.777	[1.895]	-0.021	(0.070)	-0.006	(0.093)
The extent to which you are a good, moral person and living according to your personal values	8.558	[1.379]	0.052	(0.071)	0.043	(0.092)
The quality of your family relationships	8.115	[1.765]	0.064	(0.070)	0.012	(0.092)
Your financial security	6.281	[2.304]	0.057	(0.071)	0.053	(0.088)
Your sense of security about life and the future in general	6.564	[2.229]	-0.017	(0.069)	-0.106	(0.089)
The extent to which you have many options and possibilities in your life and the freedom to choose among them	6.795	[2.238]	-0.033	(0.071)	-0.138	(0.090)
Your sense that your life is meaningful and has value	7.724	[2.053]	0.021	(0.071)	-0.096	(0.090)
Observations			1,276		818	

Notes: The table reports the coefficient of asset treatment from a separate regression with the dependent variable mentioned in the first column. All regressions include strata fixed effects and the full set of controls from Table 2, Col 2, with robust standard errors in parentheses. The

WHAT DID I LEARN?
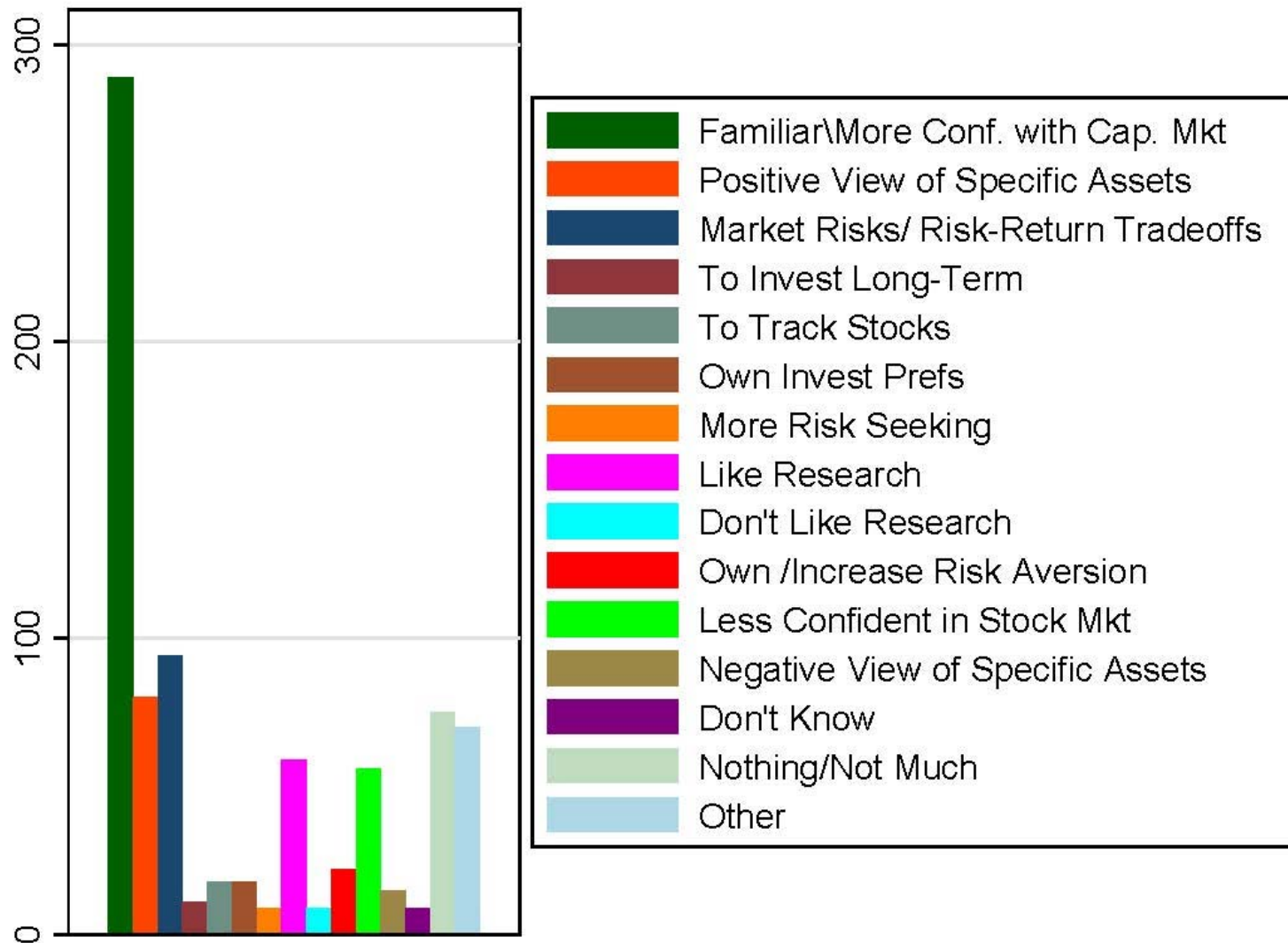
FINANCIAL LITERACY	Baseline Mean	(1) Mar-Apr (Comp.)	(2) Mar-Apr (Miss=Init)	(3) Mar-Apr (Miss=Jul)	(4) July
Financial Literacy Test [% Correct Overall]	70.186	4.961	3.083	3.888	2.909
		(1.304)	(1.127)	(1.231)	(1.224)
Individual Questions Correct? [0/1]					
Numeracy:	0.871	0.059	0.051	0.048	0.020
		(0.023)	(0.021)	(0.022)	(0.021)
Compounding:	0.693	0.058	0.033	0.057	0.034
		(0.031)	(0.028)	(0.030)	(0.032)
Inflation:	0.703	0.006	-0.004	-0.002	-0.019
		(0.026)	(0.024)	(0.025)	(0.027)
Money Illusion:	0.768	0.09	0.074	0.071	0.039
		(0.031)	(0.028)	(0.030)	(0.031)
Stock Meaning:	0.674	0.058	0.024	0.053	0.042
		(0.031)	(0.027)	(0.029)	(0.030)
Highest Return:	0.411	0.050	0.013	0.020	0.023
		(0.032)	(0.028)	(0.030)	(0.032)
Diversification:	0.793	0.028	0.025	0.025	0.022
		(0.026)	(0.024)	(0.025)	(0.026)
Risk: Stock vs Fund:	0.514[+]				0.071
					(0.033)
Observations		1065	1345	1244	1114
Strata FE		Yes	Yes	Yes	Yes
Demographic Controls		Yes	Yes	Yes	Yes
Initial Financial Literacy Score FE		Yes	Yes	Yes	Yes

FINANCIAL LITERACY AND CONFIDENCE: RELATIVE GAINS BY SEX
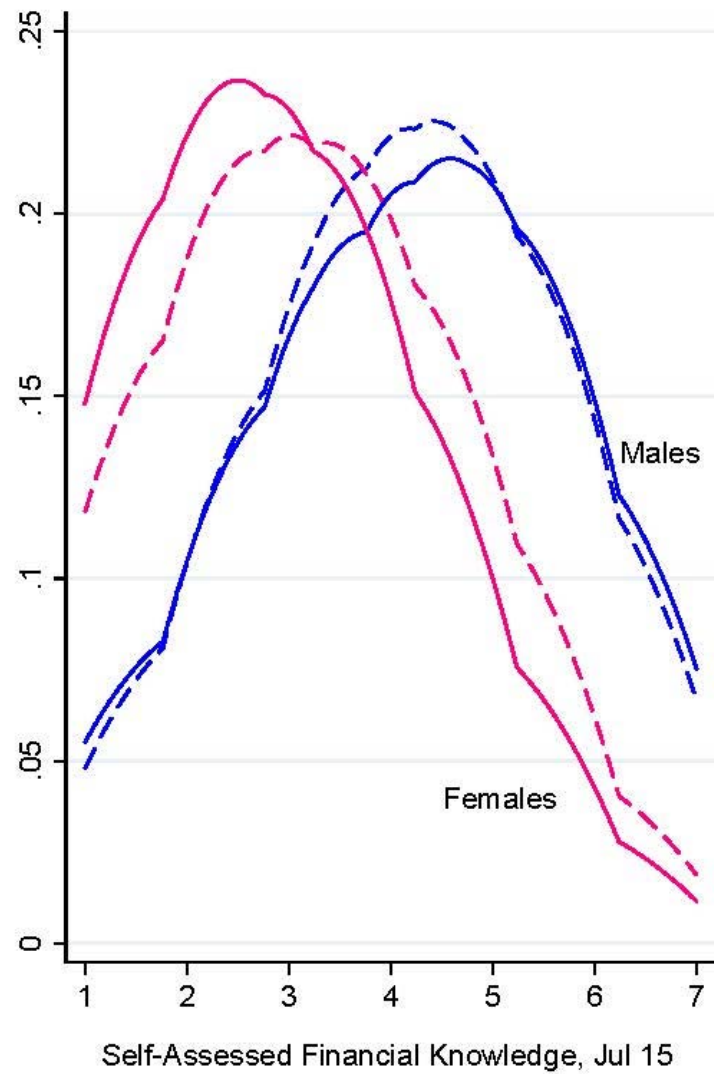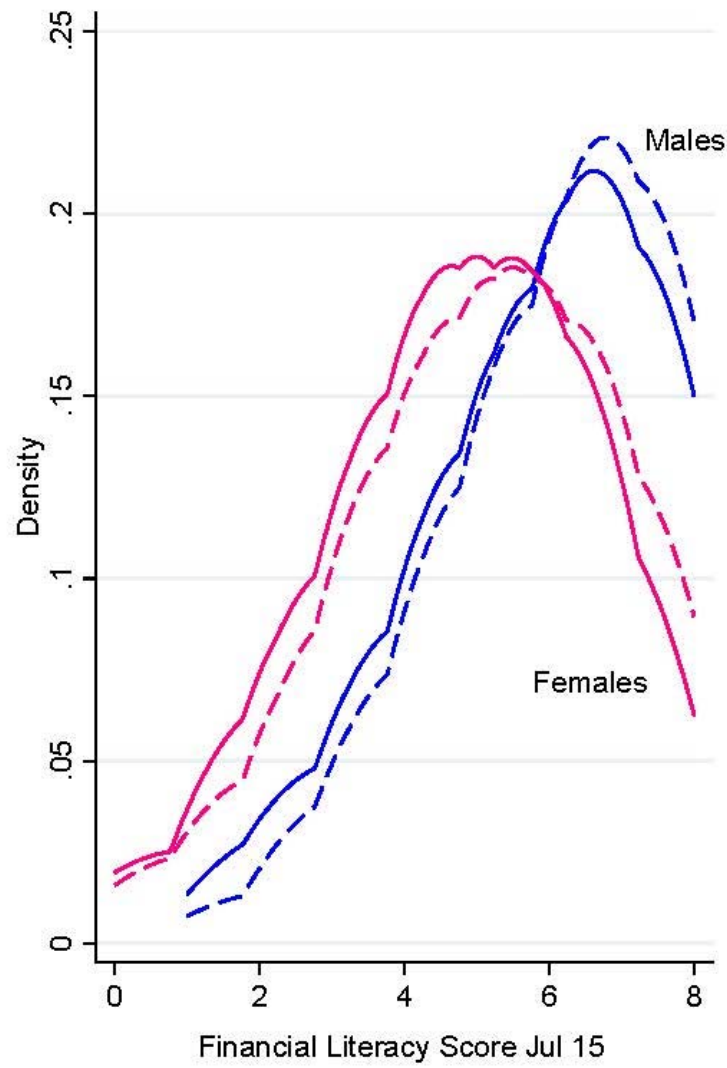
FINANCIAL LITERACY AND CONFIDENCE: RELATIVE GAINS BY SEX
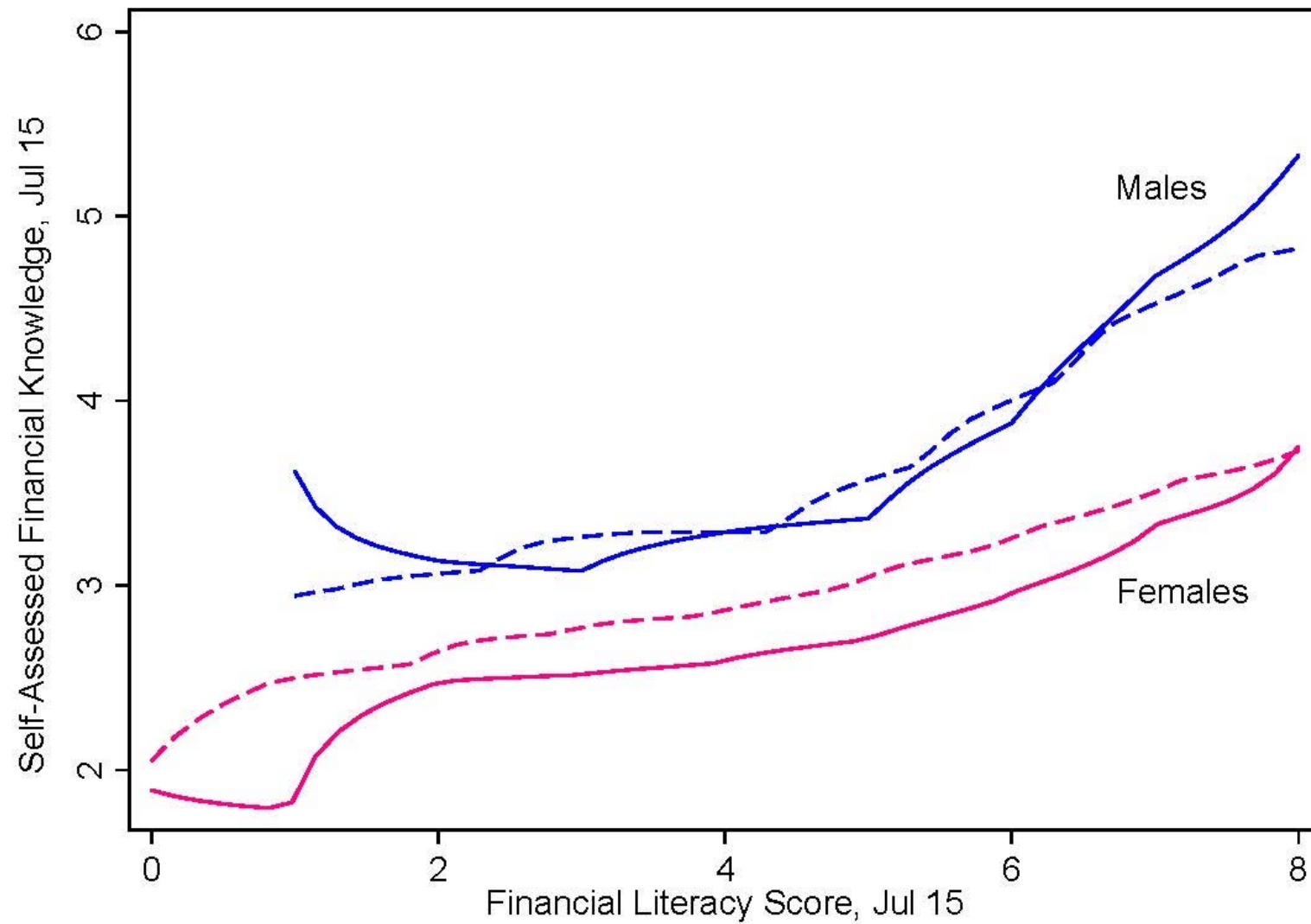
CONSEQUENCES OF 2-STATE SOLN?

	Mean	SD	All Treatment Effect	SE	Inexperienced Treatment Effect	SE
(OLS/Ordered Probits) [March 2015]						

Suppose Israel reaches a permanent agreement with the Palestinians on the principle of two states for two peoples. How do you think this will affect... [1 (worsen a lot), 2 (worsen somewhat), 3 (no change), 4 (improve somewhat), 5(improve a lot)]

	Mean	SD	Treatment Effect	SE	Treatment Effect	SE
Sociotropic Index (OLS)	0.011	[0.948]	0.041	(0.054)	0.130	(0.068)
Israel's Economic Situation? (O. Probit)	3.294	[1.329]	0.126	(0.073)	0.223	(0.094)
Israel's Security? (O. Probit)	2.956	[1.392]	-0.010	(0.076)	0.097	(0.097)
Personal Index (OLS)	-0.013	[0.929]	0.003	(0.056)	0.030	(0.070)
Your Own Economic Situation? (O. Probit)	3.048	[1.047]	-0.013	(0.077)	0.005	(0.101)
Your Own Personal Security? (O. Probit)	2.888	[1.237]	-0.002	(0.075)	0.059	(0.094)
Observations			1281 / 1282		823	

RE-EVALUATION OF RISK: STATUS QUO VS PEACE SETTLEMENT?	(1) Ordered Vote Choice	(2) Peace Index	(3) Econ Pol. Index	(4) Effects of a Peace Settlement	(5)
				Sociotropic Index	Personal Index
Treatment	0.032	-0.079	-0.099	-0.098	-0.129
	(0.065)	(0.075)	(0.073)	(0.093)	(0.095)
Risk Averse	-0.053	-0.176	-0.043	-0.140	-0.126
	(0.074)	(0.086)	(0.083)	(0.104)	(0.108)
Treatment * Risk Averse	0.109	0.291	0.115	0.218	0.205
	(0.081)	(0.095)	(0.089)	(0.116)	(0.120)
Demog. Controls	YES	YES	YES	YES	YES
Strata FE	YES	YES	YES	YES	YES
Observations	1,311	1,277	1,111	1,282	1,281
R-squared	0.550	0.458	0.212	0.395	0.349

POLITICAL KNOWLEDGE/ MEDIA SLANT VS FINANCIAL KNOWLEDGE	All				Inexperienced	
	Mean	SD	Treatment Effect	SE	Treatment Effect	SE
B. Economic and Political Facts (OLS) [Apr 2015]						
Political Platforms & Facts Score [Prop Correct of 13]	0.694	[0.212]	0.002	(0.013)	-0.010	(0.018)
Economic Facts Score [Prop Correct of 5]	0.533	[0.276]	0.017	(0.016)	0.020	(0.021)
Stock mkt perform. answer within 3pp of actual	0.393	[0.489]	0.066	(0.033)	0.091	(0.042)
Observations			1,238		782	
C. Media Consumption (OLS) [July 2015]						
Which of the following newspapers/websites do you usually read?						
Number of financial outlets [0-3]	1.117	[1.120]	0.203	(0.074)	0.195	(0.093)
Number of non-financial outlets [0-5]	1.393	[1.032]	-0.080	(0.075)	-0.135	(0.097)
Haaretz [0/1]	0.151	[0.358]	0.005	(0.023)	-0.028	(0.029)
Israel Hayom [0/1]	0.431	[0.495]	-0.052	(0.035)	-0.066	(0.045)
Observations			1,120		705	

ORDERED VOTE CHOICE ONE YEAR LATER	ITT	TOT	ITT	TOT
	(1)	(2)	(3)	(4)
Treatment	0.040 (0.020)	0.047 (0.024)	0.025 (0.016)	0.029 (0.019)
Voted Right '15			-0.266 (0.027)	-0.266 (0.027)
Voted Left '15			0.202 (0.024)	0.203 (0.024)
Demographic Controls	YES	YES	YES	YES
Strata FE	YES	YES	YES	YES
Observations	943	943	939	939
R-squared	0.530	0.529	0.657	0.657

DESIGN: IN-GROUP vs OUT-GROUP ASSETS

- Out-group assets (Palestinian):
    - more novel risks and considerations
    - assets more sensitive to the peace process
- In- group assets (Israeli):
    - "Familiarity breeds investment" (Huberman RFS 2001)
    - Less subjective to potential stigma or psychological costs from *trading with the enemy.*
- Exogenous price increases should accentuate engagement and effects.

- Our prior: former effects could dominate.

% TAKE UP: BY IN-GROUP/ OUT-GROUP

Initial Endowment	Voucher (TA25)	Israeli Stock	Palestinian Stock
Low Allocation (NIS 200/ USD50)	78.6	78.4	77.2
High Allocation (NIS 400/ USD100)	91.3	86.1	78.8

Asset Price Ratio (Initial Price = 1)

LUMI

TA25

BEZQ

BOP

PLE

PALTEL

Elections

baseline survey

financial trading treatment begins

early divestment (1/3)

post survey

final financial survey (2/3)

political and econ. knowledge survey

February 1, 2015   March 1, 2015   April 1, 2015   May 1, 2015

1.2

1.1

1

.9

.8
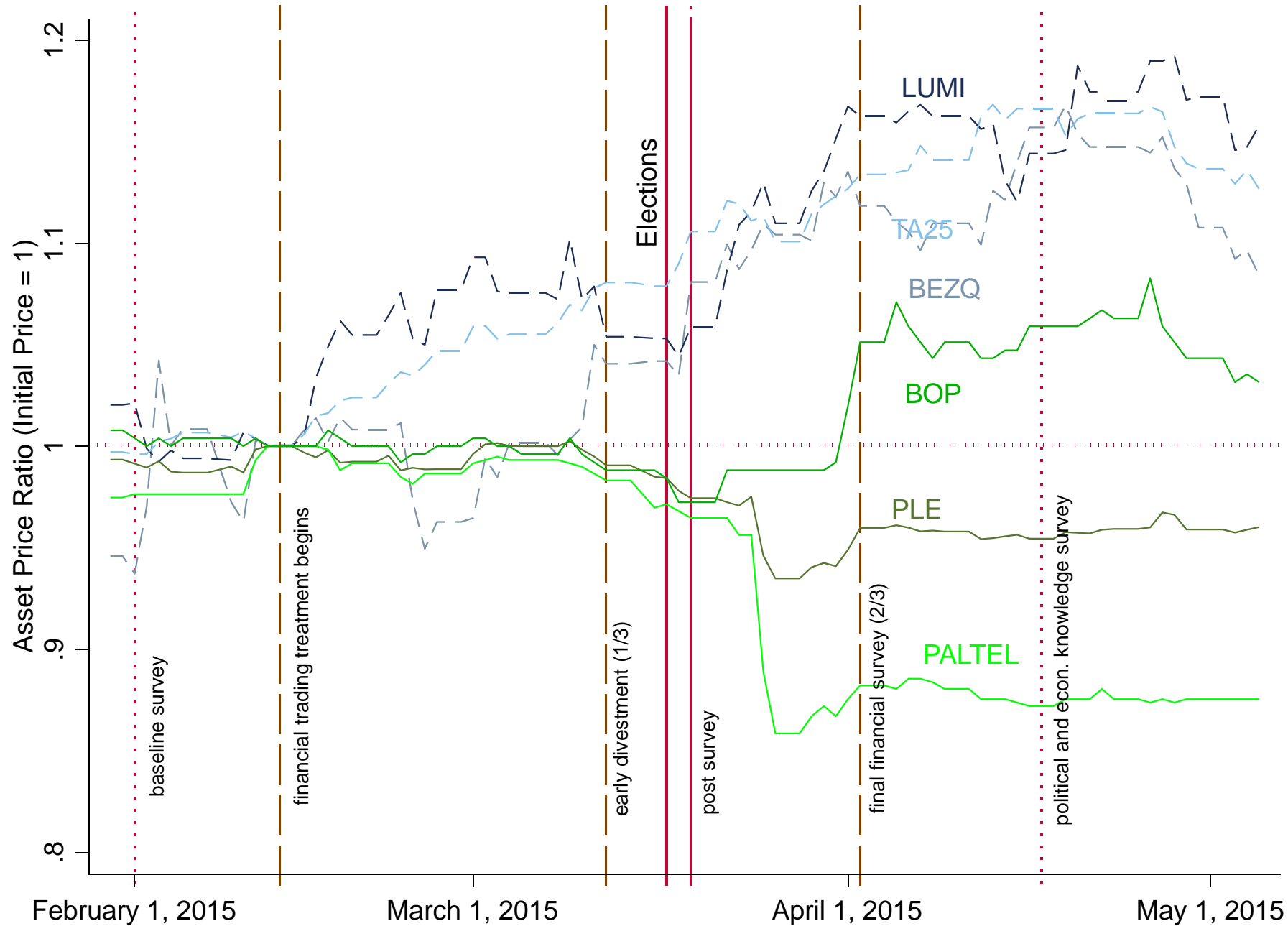
IN-GROUP VS OUT-GROUP ASSETS?	ITT	TOT	ITT	TOT	ITT	TOT
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Ordered Vote Choice						
Palestinian Assets			0.032	0.042	0.042	0.055
			(0.022)	(0.028)	(0.024)	(0.031)
Non-Palestinian Assets			0.065	0.078	0.038	0.043
			(0.020)	(0.024)	(0.036)	(0.042)
Treatment	0.041	0.051				
	(0.020)	(0.025)				
Price change of asset by elections (bp.)	0.454	0.517			0.507	0.660
	(0.222)	(0.273)			(0.557)	(0.651)
Observations	1,311	1,311	1,311	1,311	1,311	1,311
R-squared	0.550	0.548	0.550	0.547	0.550	0.548
Panel B: Peace Index						
Palestinian Assets			0.111	0.142	0.120	0.155
			(0.051)	(0.065)	(0.058)	(0.072)
Non-Palestinian Assets			0.110	0.131	0.086	0.098
			(0.047)	(0.057)	(0.086)	(0.099)
Treatment	0.109	0.136				
	(0.046)	(0.058)				
Price change of asset by elections (bp.)	0.044	-0.023			0.442	0.632
	(0.520)	(0.631)			(1.297)	(1.510)
Observations	1,277	1,277	1,277	1,277	1,277	1,277
R-squared	0.455	0.455	0.455	0.455	0.455	0.455
Demographic Controls	YES	YES	YES	YES	YES	YES
Strata FE	YES	YES	YES	YES	YES	YES

DIFFERENT CHANNELS OF LEARNING BY IN/OUT-GROUP

Panel A. N= 840 [Compliers]	**Palestinian Stock (vs Israeli)**	
Engagement Index (Z-Score)	-0.333	(0.082)
Deciles of Time Spent upto Mar 4	-0.282	(0.234)
# Decisions Registered [0-3]	-0.271	(0.075)
# Non-Zero Trades to Mar 4 [0-3]	0.361	(0.145)
# Buy Decisions [0-3]	-0.067	(0.082)
# Sell Decisions [0-3]	0.428	(0.130)
# Facts Correct on Mar 4	-1.438	(0.144)
Sector of Stock?	-0.175	(0.047)
Movement in Price Last Week?	-0.302	(0.056)
Movement in Price Last 3 Years?	-0.410	(0.052)
Movement in Price Next Week?	-0.551	(0.056)
Panel C: Perceived Most Important Determinant of Asset's Value Mar 4 [N=746]		
Companies' Management	-0.193	(0.073)
Companies' Employees	0.029	(0.045)
National Econ. Policies & Conditions	-0.431	(0.092)
Domestic Political Conditions	0.193	(0.046)
Peaceful Relations w/ Neighbors	0.401	(0.062)

Notes: Each row represents a separate OLS regression of measures of engagement on the subtreatments as of March 4, the last date at which both

DIFFERENT CHANNELS cont.d

	(1) OLS Ordered Vote	(2) OLS Peace Index	(3) OLS Econ. Policy Index
[Compliers on March 4]			
The Main Determinant of My Asset's Value is:			
1 if Companies' Employees	0.012	-0.008	0.454
	(0.067)	(0.141)	(0.132)
1 if National Econ. Policies & Conditions	0.044	0.148	-0.002
	(0.034)	(0.081)	(0.065)
1 if Domestic Political Conditions	0.076	0.049	0.144
	(0.052)	(0.125)	(0.099)
1 if Peaceful Relations w/ Neighbors	0.038	0.279	0.041
	(0.042)	(0.102)	(0.081)
Strata FE	YES	YES	YES
Demographic Controls	YES	YES	YES
Observations	741	732	721
R-squared	0.609	0.526	0.322

CONTEXT: ISRAEL, 2013 - 2016
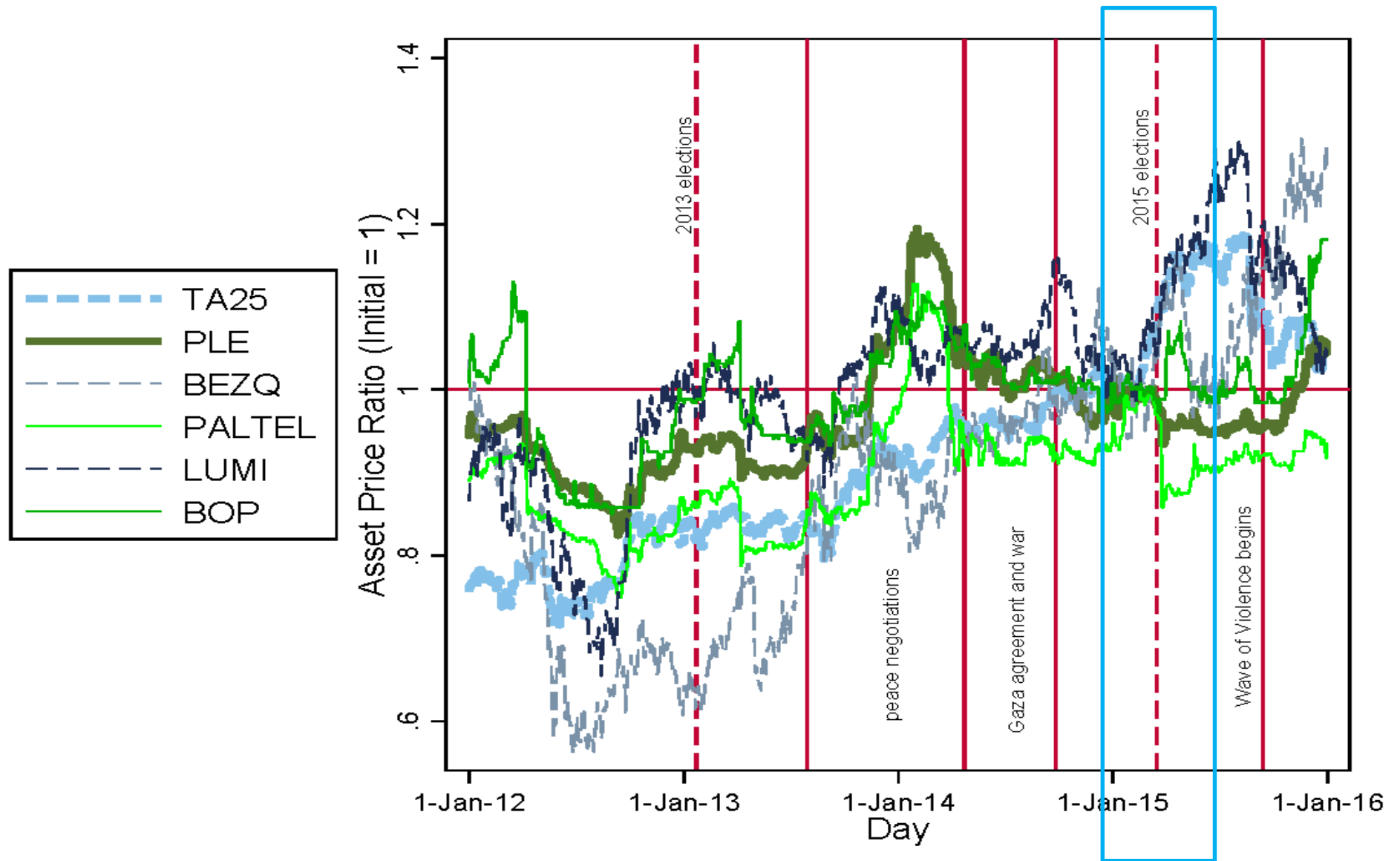
IN-GROUP VS OUT-GROUP ASSETS

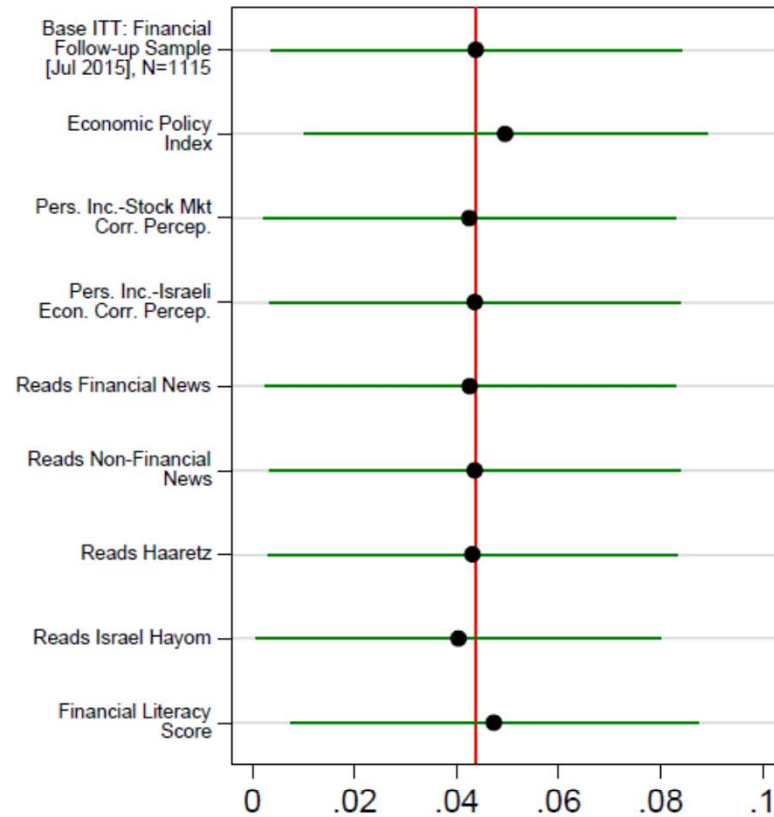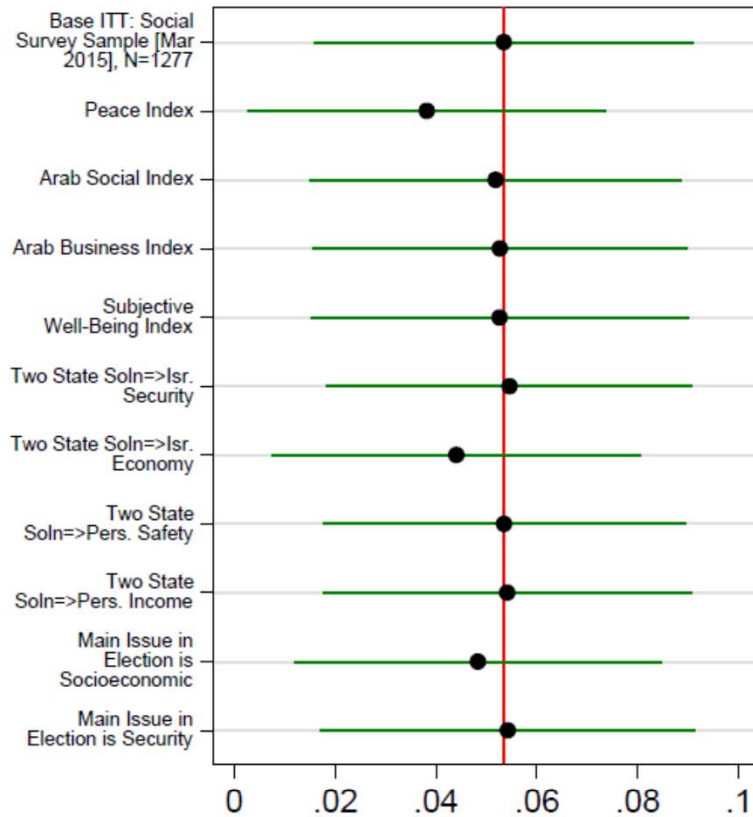| Out-group assets	In-group assets
Greater Association of Stocks with Peace Process	**Greater Takeup and Engagement**
And those that did make this association… **Change Peace Attitudes More.**	And those that were engaged… **Learn more about Financial Markets.**
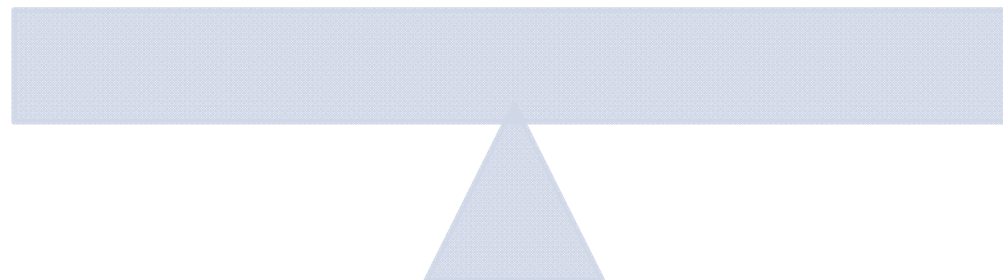
HOW MUCH OF THE EFFECT IS EXPLAINED?

EFFECTS BY REGION

Left map (Vote 2013):

- Northern 0.519
- Haifa 0.472
- Central District 0.461
- Tel Aviv 0.547
- West Bank 0.25
- Jerusalem 0.31
- Southern District 0.343
- Gaza

Vote 2013 (0-R, 0.5-C, 1-L)

Right map (Treatment Effect):

- Northern 0.083
- Haifa 0.025
- Central District 0.062
- Tel Aviv 0.099
- West Bank -0.004
- Jerusalem -0.003
- Southern District 0.147
- Gaza
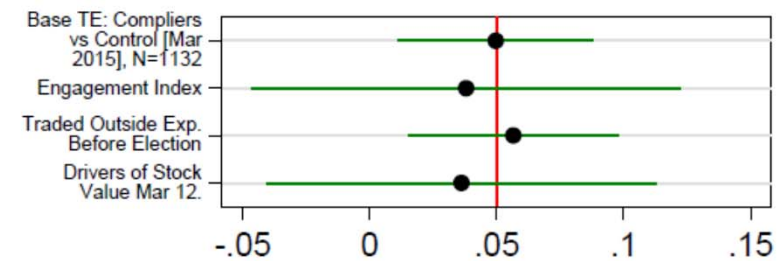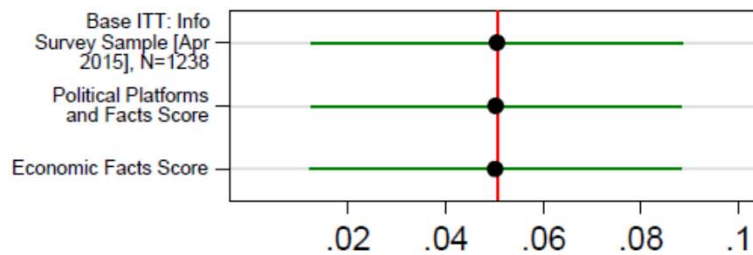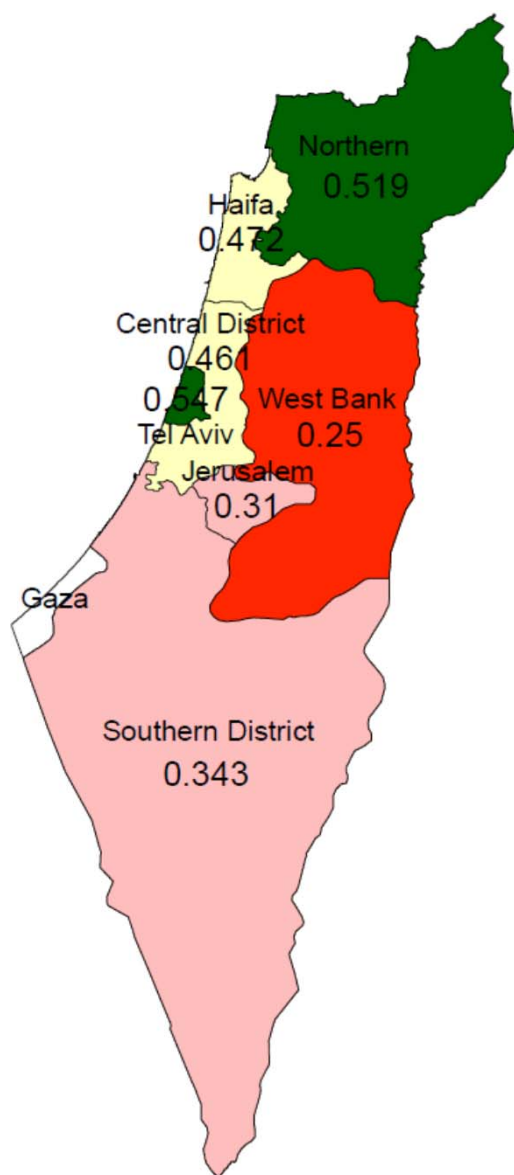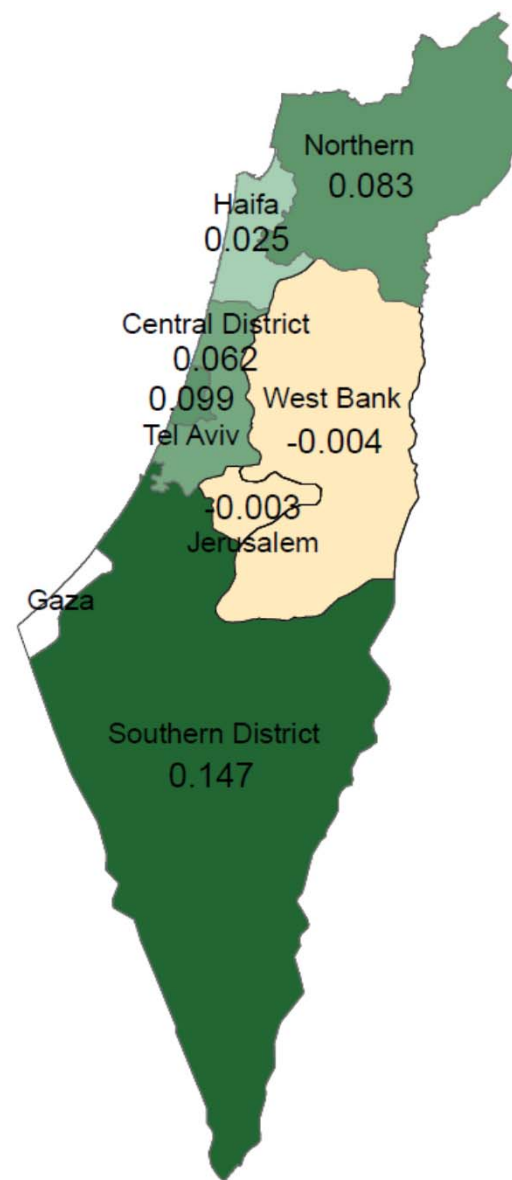
Treatment Effect

VALUING PEACE

1. Conflict costly. But making concessions for peace is also risky.

2. People have different personal exposure to risks and returns from conflict and peace, and may not internalize the gains from peace and risks faced by the country or region as a whole.

Can exposure to financial markets
-- that make individuals more aware of the economic costs of conflict
-- change individuals' attitudes towards war and peace...
... and even their votes?

And can this happen in the context of a persistent ethnic conflict?

In Israel, yes.

MAIN RESULT

- Exposure to incentives to trade in financial markets increases likelihood of voting for left parties (pro-peace initiatives) by 4-6 percentage points (relative to 25% vote share in control).
    - Similarly reduces probability for voting for right parties by 4-5pp (relative to 36% vote share in control)

- Exposure also increases support for peace deals and reduces opposition to specific concessions

- Effects persist (and even cumulate) one year later.

MECHANISM

Consistent with human capital formation: learning about both financial markets and the economic costs of conflict.
Direct evidence for:
- Increases in Financial Literacy (based upon standard test questions); (Self- reported) familiarity with the stock market
- (Persistent) Increases in Consumption of Financial News and knowledge of financial market performance.
- Increased evaluation of Benefits of a Peace Settlement to the Israeli Economy relative to status quo (particularly for the risk-averse)
- Political Effects stronger for ex ante inexperienced investors, who become like those experienced investors in their votes and political attitudes.

Find no evidence for, or can rule out other mechanisms, including:
- Direct Material Incentives.
- Wealth Effects/ Changes in Subjective Well-Being
- Change in Knowledge of Political Platforms / Facts
- Change in Overall Consumption or Slant of Non-Financial (Political) Media
- Short-term Attention/ Salience

Exposure to in-group vs out-group assets have similar overall political effects, but appear to operate through different learning channels.

CONCLUDING THOUGHTS ON POLICY (+ FOLLOWUPS)

• Policy focus on peacemaking tends to emphasize third party enforcement and diplomacy.

• Financial market exposure, designed to facilitate learning, shows significant promise at making more clear the economic costs of conflict.

• Further…

  • Don't need long durations (four weeks had substantial effects)
  • Don't need high stakes ($50 ~ $100)
  • Don't need out-group assets. Less likely to inspire backlash.
  • Intervention is unobtrusive and non-paternalistic, helps individuals learn about financial markets and lets individuals reach their own conclusions about the economic costs of conflict (contrasts with some information campaigns to support peace that may also be construed as propaganda).

FOLLOWUP STUDIES

- <u>Learning by Trading</u> (with Moses Shayo)
- <u>Brexit 2016</u> (with Yotam Margalit and Moses Shayo):
  - Exposure to trade between 3 firms that complement the UK economy
    - EU: Remy Cointreau, Siemens, VW
    - non- EU (US): Robert Mondavi, Apple, Ford
    - … and 3 UK firms that complement the EU
    - Diageo (Johnnie Walker/ Bells), Vodafone, Rolls-Royce
  - UK Short condition
  - US Baseball

  Preliminary findings: (ex ante undecideds: 22% vote for Remain in control, 40% in those with EU/UK complementary assets).
- <u>Palestinian Authority</u> (with Amaney Jamal)
- ?