Investor Valuations of Japan's Adoption of a Territorial Tax Regime: Quantifying the Direct and Competitive Effects of International Tax Reform

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International Tax Reform

- Ten OECD countries have adopted territorial tax systems since 2000.
- Among 3 latest regime changes (Japan, UK, and New Zealand), each have also reduced corporate tax rates by 2-7 percentage points.
- U.S. now accounts for roughly 79% of GDP among remaining worldwide tax regimes.

$\Rightarrow$ What effects have these reforms had on:

- Foreign and domestic investment (repatriations)?
- Tax avoidance?
- International tax competition?
- Firm competitiveness?

Evaluating Repatriation and Investment Reactions

Hasegawa and Kiyota (2013)

Japanese Affiliate Dividend Payments

	Average (Millions)		Percentile (USD Millions)			
Year	JPY	USD	50^{th}	95^{th}	99^{th}	N
2007	131	1.1	0	2.9	17.9	8452
2008	92	0.9	0	2.8	15.3	9333
2009	147	1.6	0	2.7	17.6	9928

- Increased dividend payments were concentrated among a small number of foreign affiliates
- Consistent with the main aim of the dividend exemption, foreign affiliates with larger retained earnings (relative to sales) paid relatively larger dividends.
- Dividend payments were not significantly affected by the rate of tax savings on repatriated earnings or by withholding tax rates.

Evaluating Repatriation and Investment Reactions (cont.)

Tajika, Hotei, and Shibata (2012):

- Increased dividend receipts were predominantly concentrated among more liquidity-constrained Japanese parents
- Among less constrained firms, no significant effect on the proportion of parents receiving increased dividends

Egger, Merlo, Ruf, and Wamser (2012):

- Similar reform in the U.K. (2009) triggered significant short-term reactions in terms of affiliate repatriations and investment

Valuing the Full Range of Reform Consequences

⇒ We aim to consider the *full* range of effects of Japan's adoption of a 95% dividend exemption system on firm after-tax profitability, including:

- Tax savings on repatriated retained earnings
- Tax savings on future profits (through real investment or income reallocation)
- Enhanced ability to compete in foreign markets

⇒ **These effects should be captured by changes in stock market valuations.**

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Research Approach

- We employ an event study methodology to quantify investor valuations of any anticipated gains following the revelation of important information related to discussion and eventual adoption of Japan's 2009 dividend exemption.
- In order to identify sources of gains more precisely, we exploit information on key firm characteristics (e.g. ownership of foreign subsidiaries, location (e.g., presence in tax haven), repatriation tax savings rates, intangible intensity, deferred tax liabilities, etc.) and estimate their contribution to abnormal stock returns in both Japanese *and U.S.* markets surrounding nine candidate event dates.
- We use German firms' stock market valuations to control more narrowly for global market conditions (95% dividend exemption system since 2001).

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Abnormal Returns (AR) - Standard Approach

- Normal returns are defined on the basis of historical co-movement between individual stock returns and returns on the overall market.
- **Abnormal returns (AR)** are defined as the difference between actual stock returns and predicted normal returns in a subsequent event period.
- ARs are summed up over multiple days surrounding each event date to obtain **cumulative abnormal returns (CARs)**.

▸ Basic Details ▸ Single-Step Details

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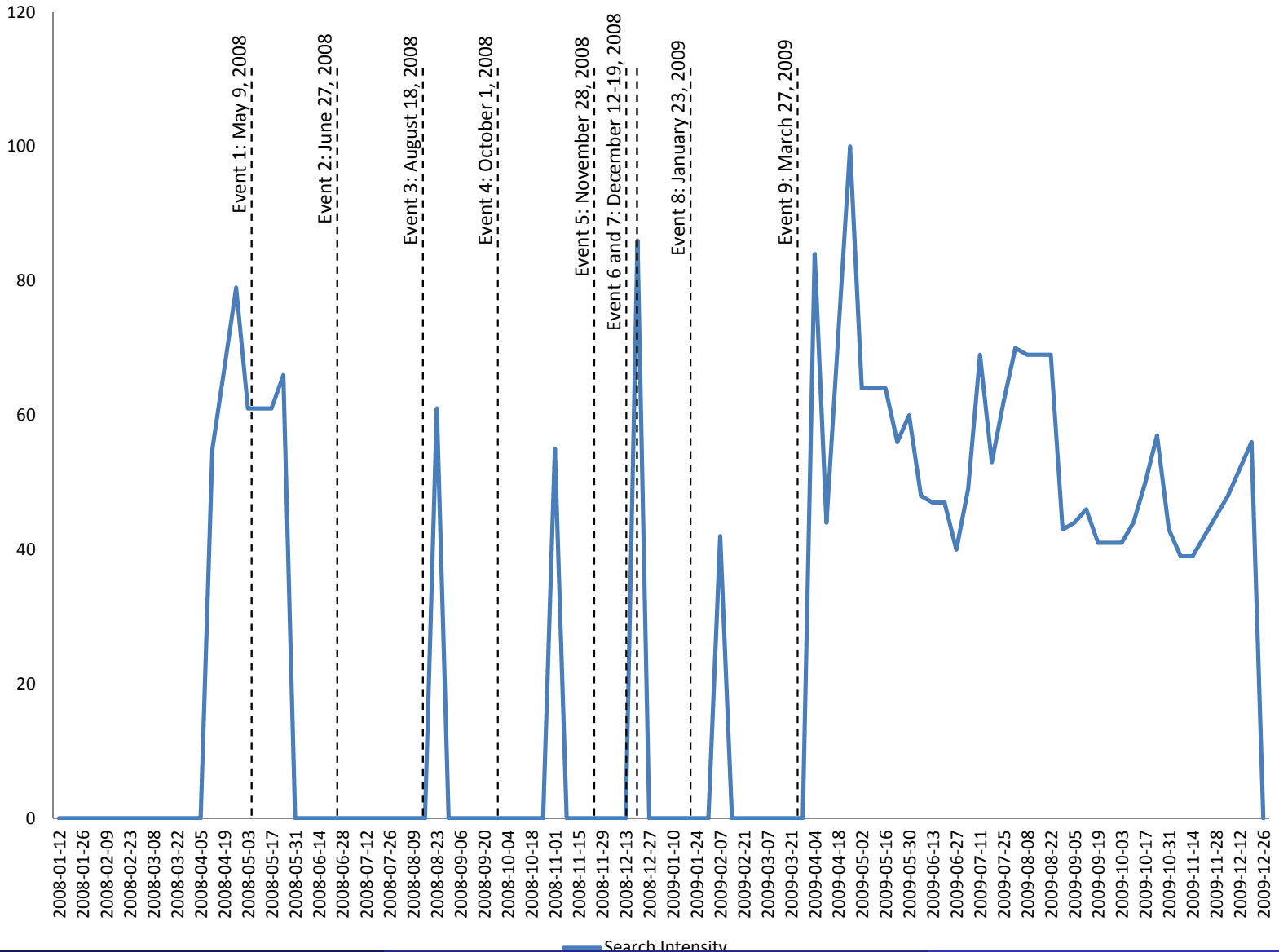
Event Dates

May 9, 2008	Minister Akira Amari instructs METI to examine implementation of a foreign income exemption system
Jun. 27, 2008	Cabinet approves "Basic Policies for Economic and Fiscal Reform 2008," including tax reform to stimulate profit repatriation by Japanese multinational corporations (MNCs)
Aug. 18, 2008	Nihon Keizai Shimbum gives advance details of METI's interim report, "Repatriations of Foreign Profits by Japanese Enterprises: Toward the Introduction of a Dividend Exemption Regime"
Oct. 1, 2008	Prime Minister Aso Taro indicates support for introduction of a dividend exemption system before full House of Representatives.
Nov. 28, 2008	Government Tax Commission releases their "Policy Recommendation for Tax Revisions for Fiscal Year 2009," including dividend exemption proposal
Dec. 12, 2008	Liberal Democratic Party releases their "Large Package of Tax Revisions for Fiscal Year 2009," including introduction of dividend exemption
Dec. 19, 2008	Ministry of Finance releases their "Large Package of Tax Revisions for Fiscal Year 2009," including introduction of dividend exemption
Jan. 23, 2009	Cabinet approves "The Outline of Tax Revisions for Fiscal Year 2009," which includes dividend exemption provisions
Mar. 27, 2009	Dividend exemption provisions are passed into law

Google Search Intensity Metrics - Japan



Data Sources

Estimation sample consists of:

- Daily stock market capitalization data 2006-2009 for all publicly-traded Japanese, U.S., and German firms
- Financial statement data 2005-2009 from Orbis for all corresponding Japanese, U.S., and German parent companies and their majority-owned foreign subsidiaries.
- Industry-level intangible asset stocks and investment flows from various sources, including the Japanese Research Institute of Economy, Trade, and Industry (RIETI).
- Statutory tax rate data from numerous sources.

▸ Firm Characteristics

Data Selection

- Multinationals (MNCs) are identified on basis of existence of at least one matched subsidiary, as defined in Orbis.
- Domestic firms represent all remaining firms (verified by direct examination of financial statements).

$\Rightarrow$ For computational reasons, we focus on the largest 25% of domestic firms and MNCs in each country (by market capitalization):

Sampled Parent Firms

Country	Domestic Firms	MNCs
Japan	361	281
U.S.	180	397
Germany	42	49

Accumulated Aggregate Percent Changes in Stock Market Capitalization by MNC Status and Tax Haven Presence

	Event Date				
	Announce-	Recommendation / Large Packages			Enact-
	-ment	1^{st}	2^{nd}	Last	-ment
	5/9/08	11/28/08	12/12/08	12/19/08	3/27/09
	(1)	(5)	(6)	(7)	(9)
Japan					
Domestic	0.399	-0.318	1.443	0.322	1.513
MNC (All)	-0.124	-0.178	-1.216	-1.586	-1.358
Haven effect	-0.026	0.481	-0.046	-0.252	-0.197
U.S.					
Domestic	0.383	-0.145	2.122	3.070	1.974
MNC (All)	0.212	-1.283	-0.426	0.068	0.196
Haven effect	0.033	0.814	1.553	1.916	1.988

→ Investors attributed relatively *larger* net gains to U.S. MNCs with sophisticated tax structures around most major events

▸ Prevalence of Havens

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Domestic	0.299	-3.945	-3.465	-4.041	-3.466
MNC (All)	-0.665	-7.395	-5.498	-4.925	-3.279
Japan (Net)					
Domestic	0.1	4.263	4.908	4.363	4.979
MNC (All)	0.541	7.573	4.282	3.339	1.921

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Net Accumulated Aggregate Percent Changes in Stock Market Capitalization by MNC Status - Japan

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Net Changes in Stock Market Capitalization:

Tax Savings on Repatriated Earnings

- Japanese MNCs with higher repatriation tax savings rates (lower foreign ETRs) experienced significantly greater CARs across multiple event dates, with this effect peaking by Dec. 19, 2008:

  A 10 pp ↑tax savings rate ⇒ 1.51% ↑CAR (Aggregate effect)
  ⇒ ↑\$24.6 billion in aggregate market capitalization
  A 10 pp ↑tax savings rate ⇒ 2.22% ↑CAR (Net effect)

- Investors in U.S. MNCs appear if anything less sensitive to potential tax savings. Through Dec. 19, 2008:

  A 10 pp ↑tax savings rate ⇒ 0.148% ↑CAR

Changes in Stock Market Capitalization:

Intangible Intensity and Deferred Tax Liabilities

Using intangible intensity levels as a proxy for future potential tax avoidance (and tax savings on shifted earnings):

- Relatively persistent, *negative* (but generally insignificant) impact on average CARs, independent of repatriation tax savings rates, *in both Japanese and U.S. markets*.

Using deferred tax liabilities (DTL) as a measure of *existing* tax savings potential:

- Positive impact of the tax reform on Japanese MNCs with larger DTL, but generally no effect on U.S. investor valuations

Take Aways

- Largest benefits of reform in Japan appeared to accrue to firms for which dividend exemption might create strongest new incentives/opportunities for international expansion and income reallocation.
- Despite weaker overall results among Japanese MNCs, variation in repatriation tax savings rates nevertheless made significant contributions to Japanese MNC CARs ($26.4 billion)
- Tax savvyness/aggressiveness (i.e. tax haven presence) had generally opposite effects for Japanese and U.S. firms, with investors anticipating weaker gains for Japanese MNCs with more sophisticated tax minimization arrangements.

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Take Aways (cont.)

- Firm characteristics associated with longer-term, more indirect sources of after-tax gains are largely uncorrelated with investor reactions.

$\Rightarrow$ Tax avoidance opportunities do not appear to play a major role in investor valuations

$\Rightarrow$ **Is this because of different attitudes toward taxation or because more tax-aggressive Japanese firms were largely unconstrained by worldwide taxation pre-2009?**

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EXTRAS

Market Model (Standard Approach)

$$r_{it} = \alpha_i + \tilde{\beta}_{\mathbf{i}}\tilde{\mathbf{R}}_{\mathbf{t}} + \epsilon_{it} \quad \forall t = -T, -T+1, \ldots -1$$

- r_{it} = date t risk-free stock return for firm i.
- $\tilde{\mathbf{R}}_{\mathbf{t}}$ = vector of risk-free total market portfolio returns on TOPIX (TSE) *and* NYSE/Nasdaq/AMEX

Abnormal returns (AR) are defined as out of sample prediction errors:

$$\begin{aligned}
\widehat{AR}_{it} &= r_{it} - \widehat{r}_{it} \\
&= r_{it} - (\widehat{\alpha}_i + \widehat{\tilde{\beta}}_{\mathbf{i}}\tilde{\mathbf{R}}_{\mathbf{t}}), \forall t = T_0, \ldots T_1 \\
\widehat{CAR}_{it} &= \sum_{s=T_0}^{t} \widehat{AR}_{is} \Rightarrow \widehat{ACAR}_t = \frac{1}{N}\sum_{i=1}^{N} \widehat{CAR}_{it}
\end{aligned}$$

Back

Dummy Variable (Single-Step) Approach

$$r_{it} = \alpha_i + \tilde{\beta}_{\mathbf{i}}\tilde{\mathbf{R}}_{\mathbf{t}} + \sum_{s=T_0}^{T_1} \gamma_s D_s + \tilde{\delta}_{\mathbf{s}}\tilde{\mathbf{X}}_{\mathbf{i}} \cdot D_s + \epsilon_{it}$$

$$\forall t = -T, -T+1, \ldots -1; T_0, \ldots T_1$$

- D_s = date s event dummy; D_s equals 1 on date s, *-1 on date* $s+1$, and 0 otherwise.
- $\tilde{\mathbf{X}}_{\mathbf{i}}$ = vector of firm characteristics from annual financial statement data (e.g. MNC status, repatriation tax savings rates, intangible intensity, deferred tax liabilities, etc.)

$$\widehat{ACAR}_t = \hat{\gamma}_t + \tilde{\delta}_{\mathbf{t}}\tilde{\tilde{\mathbf{X}}}$$

Back

Japanese Firm Characteristics by MNC Status (2005-2007)

	Domestic Firms		MNCs	
	Mean	Std. Dev.	Mean	Std. Dev.
MarketCap (mill. $)	912	2249	13033	19531
IntanIntensity	0.337	0.166	0.378	0.123
DomesticAETR	0.423	0.193	0.393	0.117
ForeignAETR			0.206	0.203
TaxSavings			0.217	0.175
MinSubMETR			0.128	0.135
I_Haven			0.587	0.493
N	361		218	

Back

U.S. Firm Characteristics by MNC Status (2005-2007)

	Domestic Firms		MNCs	
	Mean	Std. Dev.	Mean	Std. Dev.
MarketCap (mill. $)	3638	5014	24264	47814
IntanIntensity	0.259	0.201	0.466	0.190
DomesticAETR	0.233	0.187	0.308	0.175
ForeignAETR			0.168	0.200
TaxSavings			0.186	0.191
MinSubMETR			0.065	0.106
I_Haven			0.884	0.320
N	180		397	

Back

German Firm Characteristics by MNC Status (2005-2007)

	Domestic Firms		MNCs	
	Mean	Std. Dev.	Mean	Std. Dev.
MarketCap (mill. $)	1237	2158	21236	35718
IntanIntensity	0.135	0.095	0.159	0.083
DomesticAETR	0.199	0.143	0.304	0.236
ForeignAETR			0.208	0.174
TaxSavings			0.144	0.215
MinSubMETR			0.04	0.087
I_Haven			0.878	0.331
N	42		49	

Back

Prevalence of Tax Haven and Japanese Operations

Proportions of MNCs with Tax Haven Affiliates		
Country	All MNCs	Top 25% Sample
Japan	26.4	58.7
U.S.	56.3	88.4
Germany	52.4	87.8

- Among all firms, 22.3% of U.S. and 18.4% of German MNCs have subsidiaries in Japan.

▸ Back

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MNC (All)	0.541	7.573	4.282	3.339	1.921
Haven effect	1.094	4.612	3.606	3.822	5.389
Net U.S.					
Domestic	0.084	3.8	5.587	7.111	5.44
MNC (All)	0.877	6.112	5.022	4.993	3.475
Haven effect	1.153	4.945	5.205	5.99	7.574

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