

# Tax Threat and Disruptive Market Power of Foreign Portfolio Investors

Andrew Marshall, Biwesh Neupane, Suman Neupane and Chandra Thapa

8<sup>th</sup> Emerging Market Finance Conference, 2017

**Biwesh Neupane** 17<sup>th</sup> – 20<sup>th</sup> December 2017

# Introduction: Importance of FPIs



- The importance of FPIs, particularly for the capital constrained emerging markets, is well documented in literature
- Regulators often shape policies that attract and support FPIs.
- Recent evidence suggests that FPIs themselves can influence policymaking
- We extend this literature by arguing that FPIs also possess direct market-based means of instituting changes in the domestic policies





- Test direction and size of the reaction of FPIs following MAT announcement.
  - Investigate possible implications of MAT trading on stock characteristics.
  - Examine the response (direction and size) of FPIs once government removes the tax threat.





- Significant market withdrawal by FPIs following the effective date for MAT
- The outflow had detrimental bearing on the stock liquidity, stock volatility and the stock prices
- No immediate and substantial inflows once government removes the tax threat

# Contributions



- FPIs' role in influencing policymaking in emerging markets, provide evidence of new channel i.e. market withdrawal response.
- Tax avoidance and FPI in emerging markets, examining the magnitude of FPIs sensitivity to tax policies.
- Whether tax subsidies are important for FPIs.
- Methodological contribution exogenous shock
- To the conflicting literature on the destabilizing effect of FPIs' trading in emerging market

# **Summary Figures**

University of Strathclyde Business School

Month-wise total net equity trading in 2015 (Million Rupees)



## Effect of MAT Threat – DiD Results



- Difference-in-differences (DiD) method to establish causality
- Net equity trading by FPI for each sector from 1<sup>st</sup> Jan. 2003 to 31<sup>st</sup> Mar. 2015
- Top 33% of the sectors that have highest value of exposure as the treated group and bottom 33% of the sectors as the control group.

	Pre-MAT	Post-MAT	Difference	t-stat
	Threat Period	Threat Period		
Treatment Group	0.2322	-0.0484	-0.2807	-13.169
Control Group	0.1815	0.1030	-0.0785	-1.233
Difference (Pre-MAT)	0.0507			1.019
Difference (Post-MAT)		-0.1514		-3.879
Difference-in-Differences			-0.2022	-3.810
				J
		_		
			4.76 Million	

# Results – DiD regression

	-					
	Specification I	Specification II	Specification III	Specification IV	Strathclyde Business	
MAT effect_ $\times$ TRMT	-0.360***	-0.364***	-0.338***	-0.309***	School	
	(-5.72)	(-5.88)	(-5.12)	(-4.55)		
Stock Return		0.100***	0.101***	0.102***		
		(13.28)	(12.42)	(11.96)		
Market Return			0.0378	-0.000102		
			(1.25)	(-0.00)		
Market Volatility			-0.789**	-0.712***	7 27 Million	
5			(-2.39)	(-2.46)	7.27 101111011	
USD Volatility			-3.271	-5.269**		
5			(-1.52)	(-2.16)		
Real GDP Growth Rate			0.0105	0.00530		
			(0.92)	(0.43)		
EM Return				0.416*		
				(1.86)		
World Return				-0.304		
				(-0.46)		
US TB Rate				-2.552***		
				(-3.00)		
EM VIX Return				0.00648		
				(1.43)		
Global VIX Return				-0.00728		
				(-1.39)		
Firms Fixed Effects	Yes	Yes	Yes	Yes		
Time (day) Fixed Effects	Yes	Yes	Yes	Yes		
Sector Fixed Effects	Yes	Yes	Yes	Yes		
Adjusted R <sup>2</sup>	0.121	0.126	0.127	0.128		
Number of Firms	863	861	855	855		
Number of Observations	98,757	98,752	96,614	96,614		

# Implication of FPIs' Withdrawal



	<b>Turnover Ratio</b>	Illiquidity Index	Liquidity Index
	Specification I	Specification II	Specification III
$MAT \ effect_t \times TRMT_i \times NET_{it}$	0.0086*** (2.72)	-0.0293** (-2.04)	-1.861** (-2.29)
Volatility	-0.585***	0.662***	22.58***
Price	-0.0937**	0.303***	14.48***
Trades	(-2.28) 0.208***	(8.75) -0.268***	(7.32) -12.53***
Market capitalization	(8.22) 0.237***	(-18.96) -0.242***	(-22.51) -8.373***
Absolute return	(5.59) -0.00740***	(-6.78) 0.167***	(-9.73) 0.809***
	(-4.41)	(10.70)	(16.32)
Firm Fixed Effects	Yes	Yes	Yes
Time (day) Fixed Effects	Yes	Yes	Yes
Sector Fixed Effects	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.387	0.614	0.616
Number of Firms	779	779	779
Number of Observations	82,693	82,693	82,693

## Implication of FPI Withdrawal Stock volatility



	Specification I
$MAT \ effect_t \times TRMT_i \times NET_{it}$	-0.042*
	(-1.73)
Volatility	0.0965**
	(2.49)
Turnover Ratio	0.130***
	(3.79)
Market Capitalization	-0.0784
	(-1.42)
Price to Book Ratio	0.025
	(1.27)
Illiquidity Index	116.3
	(1.61)
Firm Fixed Effects	Yes
Time (day) Fixed Effects	Yes
Sector Fixed Effects	Yes
Adjusted R <sup>2</sup>	0.175
Number of Firms	753
Number of Observations	81,580

### Pricing effects of FPI Withdrawal Long Strategy on Treated Firms



۳	One Trading	Five Trading	Ten Trading	15 Trading	22 Trading
	Day	Days	Days	Days	Days
MAT $effect_t \times NET_{it}$	0.184***	0.0263***	0.00577***	0.000190	-0.00161
	(12.78)	(5.13)	(2.95)	(0.10)	(-0.95)
Stock Return	0.0369	-0.00807	-0.0109	-0.0120**	-0.00463
	(1.49)	(-0.80)	(-1.55)	(-2.09)	(-1.09)
Market Capitalization	-0.236***	-0.233***	-0.194***	-0.207***	-0.203***
_	(-3.09)	(-4.15)	(-3.85)	(-4.12)	(-4.88)
Price-to-Book ratio	-0.264***	-0.228***	-0.207***	-0.209***	-0.196***
	(-4.62)	(-5.64)	(-7.27)	(-7.23)	(-7.27)
Turnover Ratio	-0.00118	-0.00144	-0.00150*	-0.000648	-0.0000397
	(-0.79)	(-1.32)	(-1.78)	(-0.77)	(-0.05)
Volatility	-0.176	-0.150**	-0.0683	-0.0946**	-0.0609*
	(-1.58)	(-2.35)	(-1.44)	(-2.38)	(-1.90)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time (Day) Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.100	0.132	0.176	0.222	0.253
Number of Firms	532	528	500	511	519
Number of Observations	61,876	58,832	50,332	51,612	53,847

### Pricing effects of FPI Withdrawal Short Strategy on Control Firms



	One Trading	Five Trading	Ten Trading	15 Trading	22 Trading
	Day	Days	Days	Days	Days
MAT $effect_t \times NET_{it}$	-0.224***	-0.0419***	-0.00201	-0.00236	-0.00322
	(-5.83)	(-2.81)	(-0.20)	(-0.32)	(-0.58)
Stock Return	-0.0528	-0.00918	0.0129	0.00776	0.00505
	(-1.69)	(-0.73)	(1.45)	(1.06)	(1.07)
Market Capitalization	0.878**	0.684***	0.707***	0.633***	0.520***
	(2.71)	(3.24)	(3.12)	(3.22)	(3.07)
Price-to-Book ratio	0.246**	0.236**	0.302***	0.226***	0.148*
	(2.46)	(2.59)	(5.56)	(3.27)	(1.99)
Turnover Ratio	0.153	0.0988	-0.0409	-0.00995	0.0184
	(0.61)	(0.96)	(-0.55)	(-0.17)	(0.27)
Volatility	-0.533	0.0646	0.00565	-0.0676	0.145
	(-0.79)	(0.24)	(0.03)	(-0.51)	(1.24)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time (Day) Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.105	0.118	0.154	0.184	0.191
Number of Firms	100	100	98	100	99
Number of Observations	9,904	9,422	8,075	8,210	8,533

# FPIs' Market Re-entry: DiD Results



	Specification I	Specification II
MAT reversal $effect_t$	0.0398	•
	(0.31)	
MAT reversal effect <sub>t</sub> $\times$ TRMT <sub>i</sub>		0.0476
		(0.37)
Stock Return	0.0958***	0.0933***
	(16.47)	(13.61)
Market Return	-0.00480	0.00358
	(-0.28)	(0.18)
Market Volatility	-0.843***	-0.585**
-	(-3.52)	(-2.29)
USD Volatility	-4.229**	-2.481
-	(-2.08)	(-0.99)
Real GDP Growth Rate	0.00654	0.000681
	(0.62)	(0.06)
EM Return	-0.0161	-0.0700
	(-0.06)	(-0.26)
World Return	0.00412	0.145
	(0.01)	(0.29)
US TB Rate	-1.268***	-0.877**
	(-3.52)	(-2.37)
EM VIX Return	-0.00871*	-0.0106**
	(-1.78)	(-2.11)
Global VIX Return	-0.000391	0.00176
	(-0.09)	(0.35)
Firm Fixed Effects	Yes	Yes
Time (day) Fixed Effects	Yes	Yes
Sector Fixed Effects	Yes	Yes
Adjusted R <sup>2</sup>	0.117	0.113
Number of Firms	1070	883
Number of Observations	127.440	107,908

# Conclusion



- Significant market withdrawal as a response to tax threat
- Disruptive impact of withdrawal on stock liquidity, volatility and prices
- Elimination of threat does not lead to immediate and materially substantive inflows
- Suggest that when changes in policy of the host government are detrimental to FPIs future prospects they could directly influence policy changes by their market power
- Tax advantage is important attraction for FPIs and policy-makers should take due care in formulating, announcing and implementing policies that could effect the expected payoff of FPIs

### THANK YOU FOR YOUR TIME

# University of Strathclyde Glasgow



The University of Strathclyde is a charitable body, registered in Scotland, with registration number SC015263