China's Current Account: External Rebalancing or Capital Exodus?

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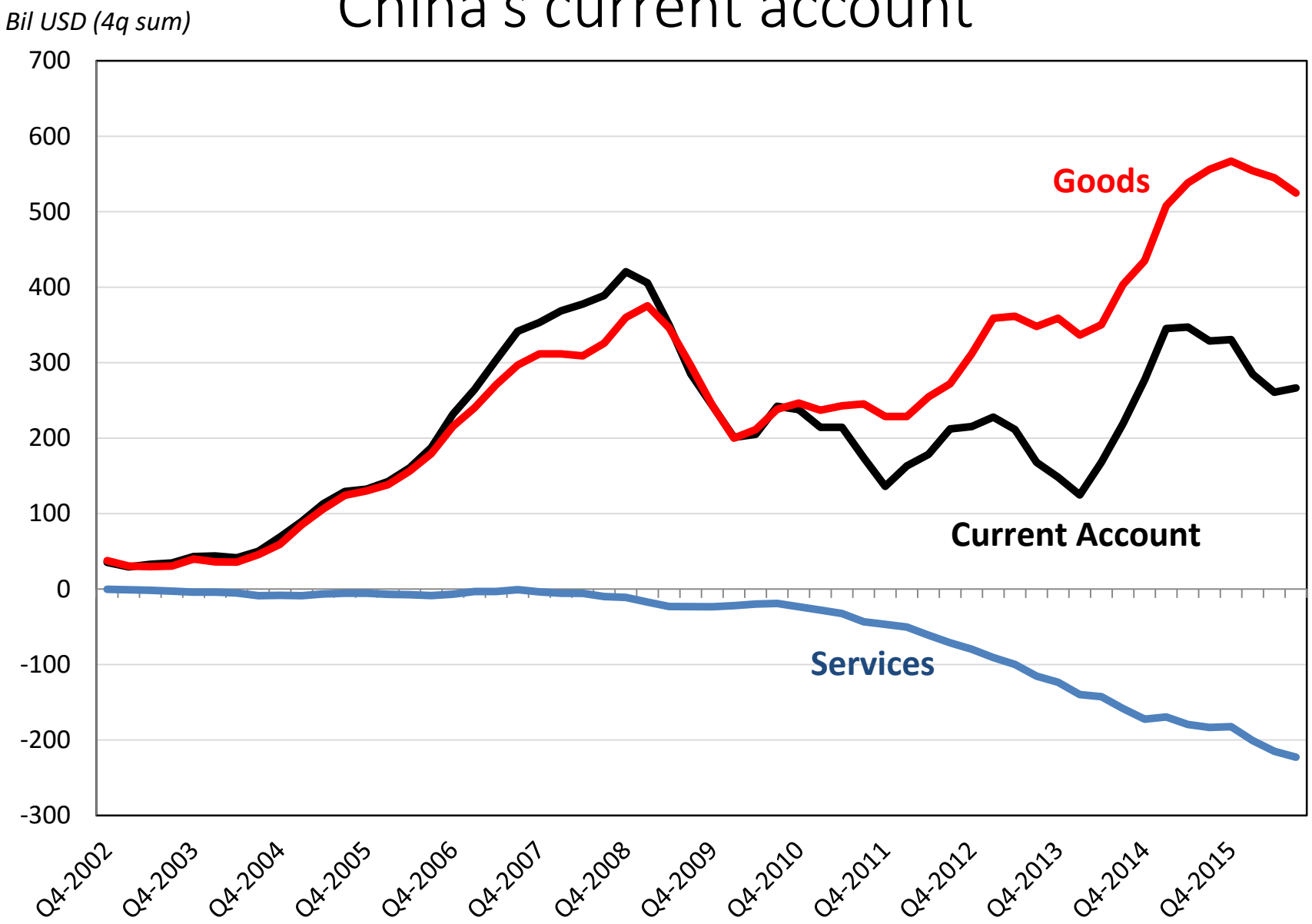
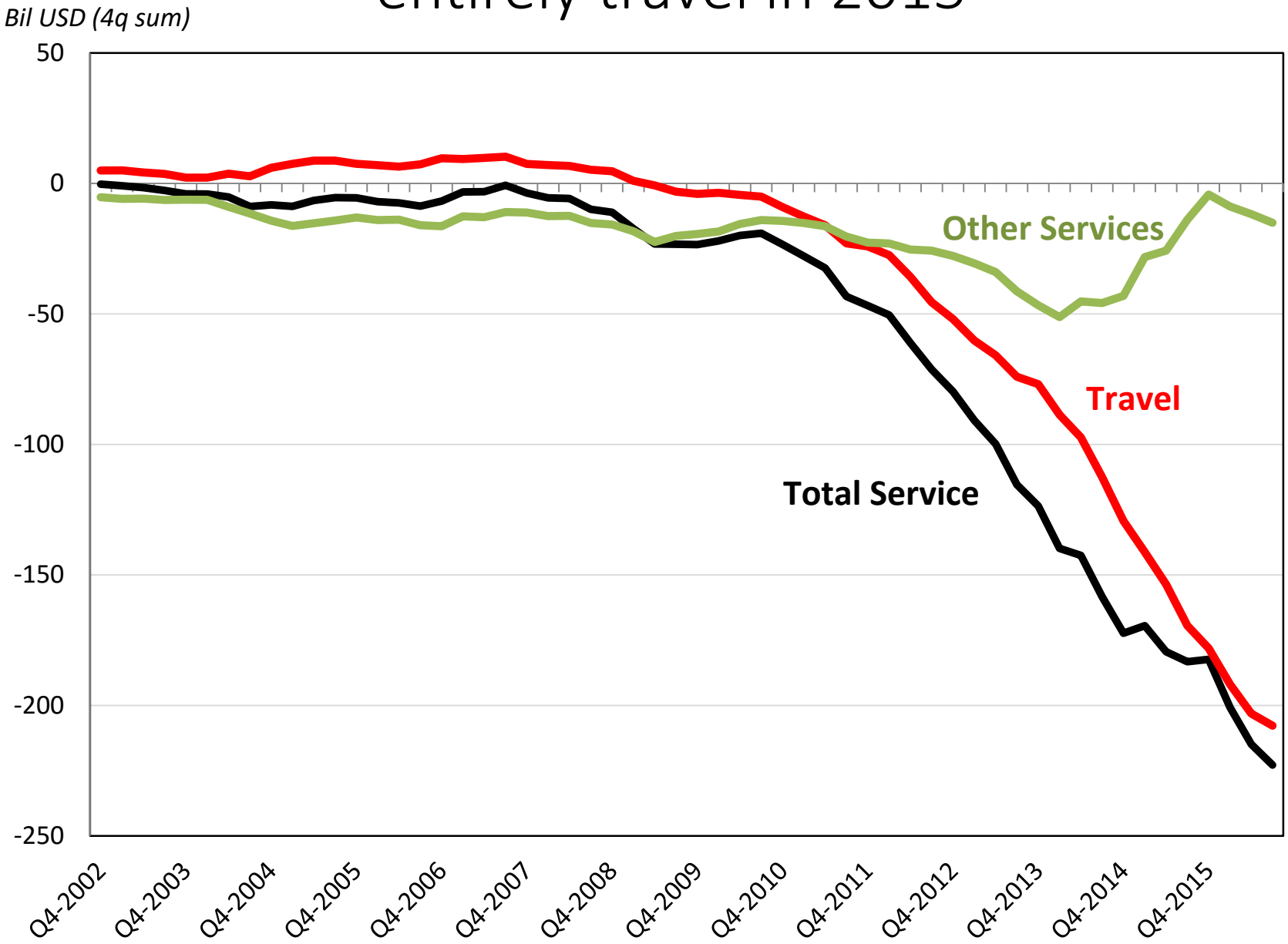
Introduction

- Some influential economists considered global imbalances, or “global saving gluts”, to have been a root cause of the Global Financial Crisis (Bernanke 2011; Blanchard and Milesi-Ferretti, 2009; Obsfeld and Rogoff, 2009).
- In the G20 summit in Seoul in 2010, global leaders called for policies conducive to “reducing excessive imbalances and maintaining current account imbalance at sustainable levels.”
- China’s current account surplus fell from 10% of GDP in 2007 to below 2% of GDP in 2013. It was 3% of GDP in 2015.
- Is China’s external rebalancing complete?

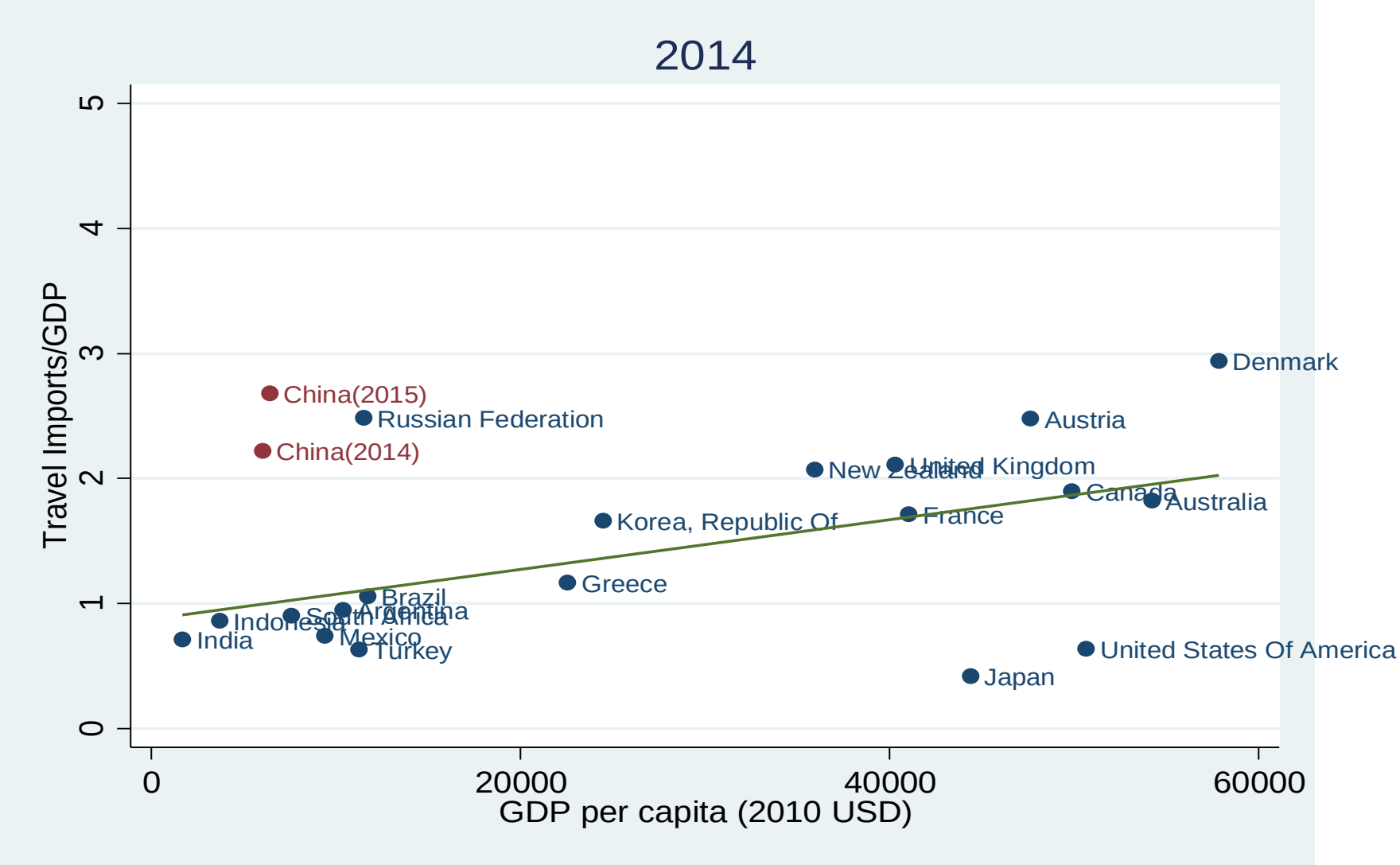
A growing service deficit pushes down China's current account



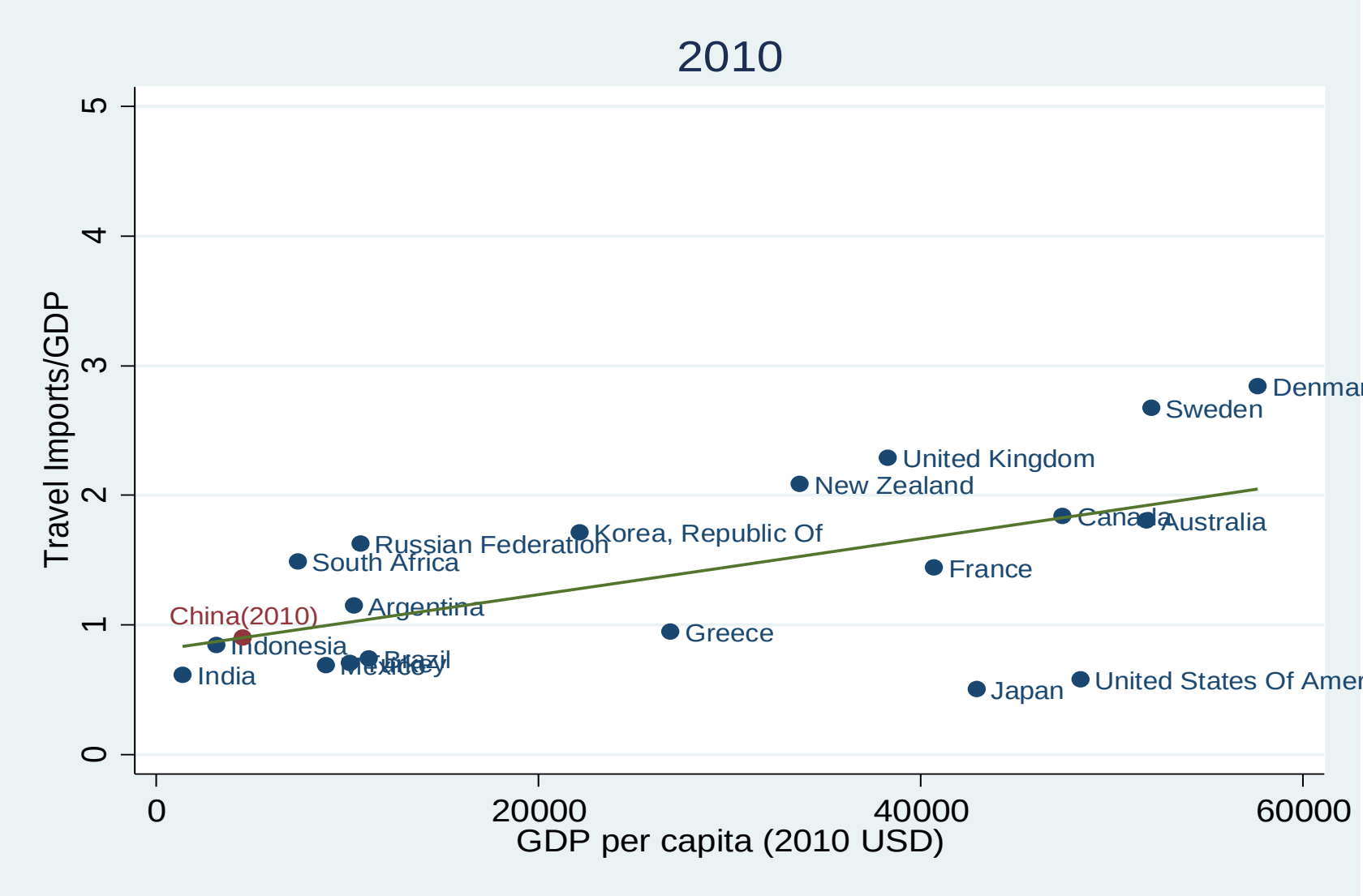
The service deficit is almost entirely travel in 2015



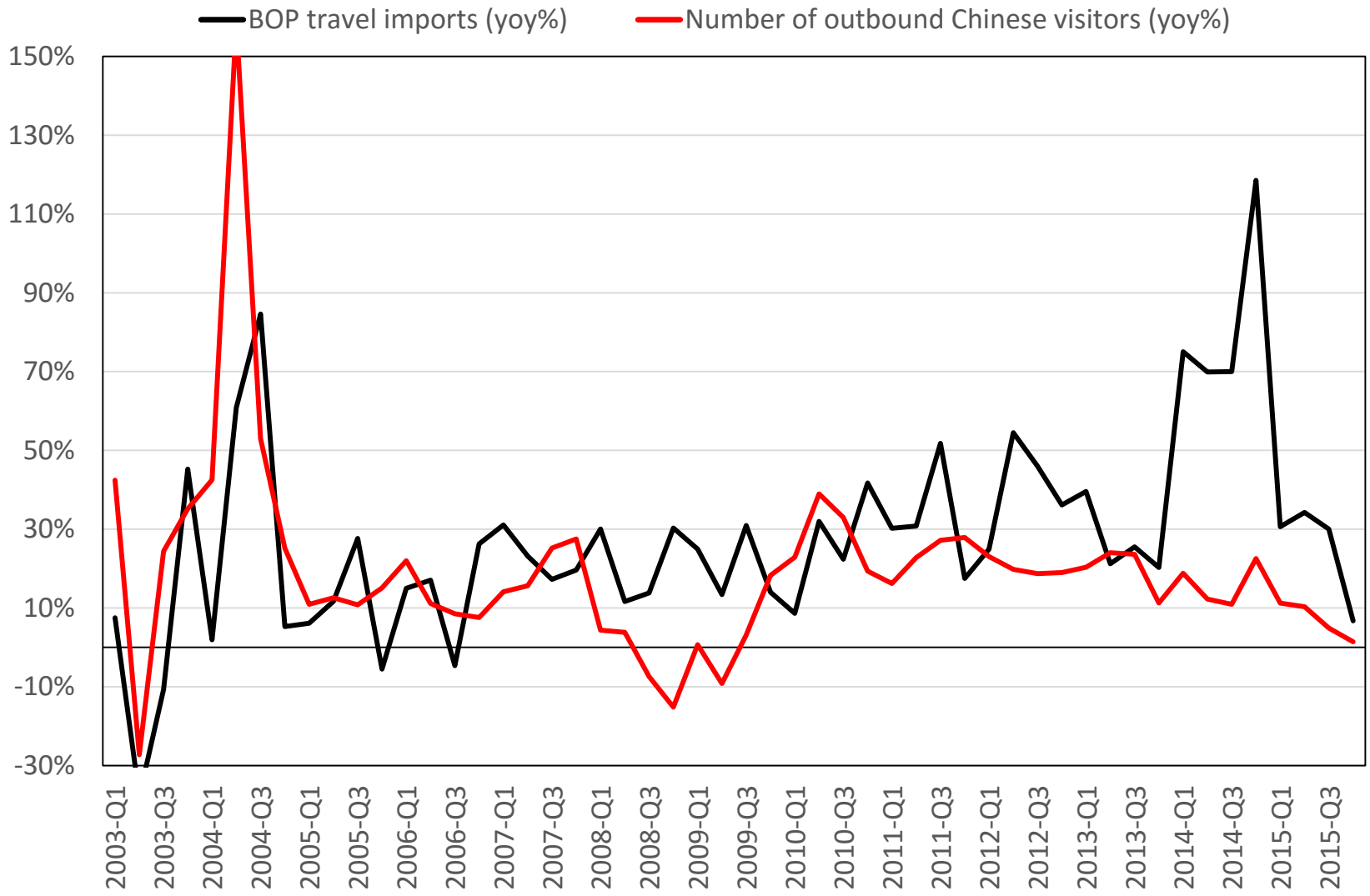
China's travel expenditure is high compared to that of other countries



A recent phenomenon… travel expenditure share was in line with GDP per capita before

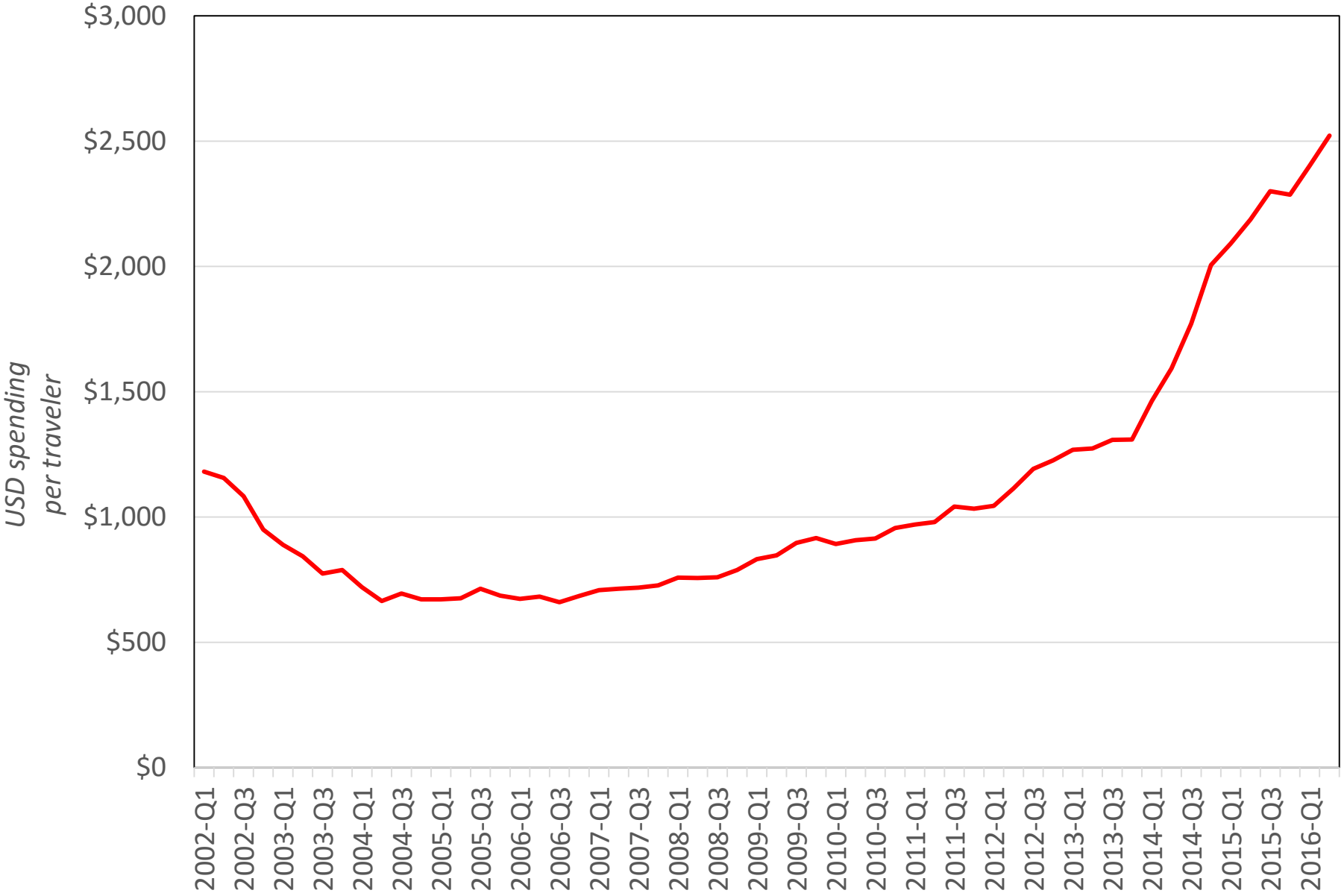


Travel expenditure growth diverging from growth in number of outbound travelers

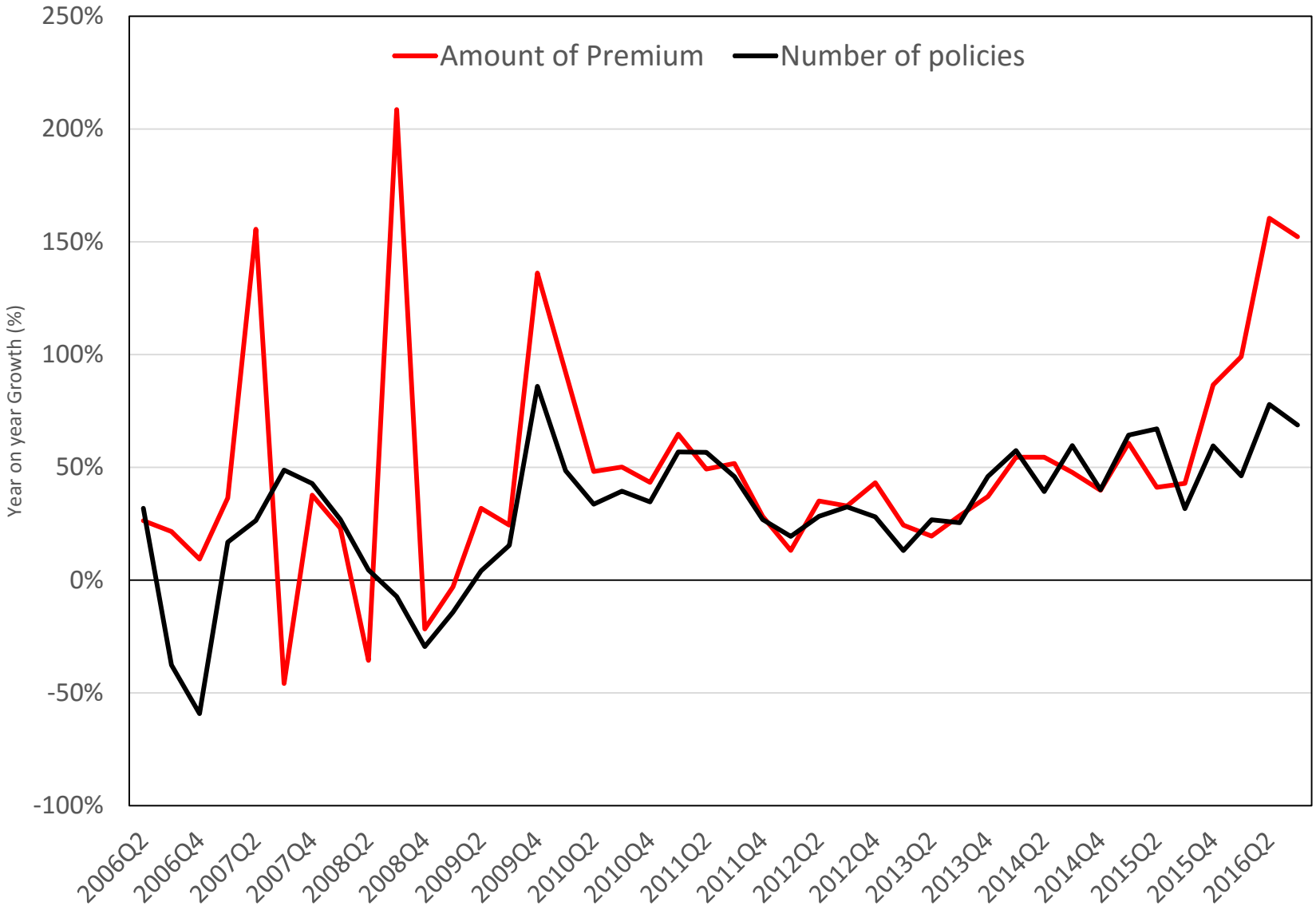


Source: SAFE; individual country tourism boards.

Average Expenditure per Mainland Traveler



HK Insurance Purchase by Mainland Visitors



Source: HK Office of Commissioner of Insurance

Definition of Travel Imports

The IMF Balance of Payment Manual 6th Edition defines travel imports as:

"Goods and services for own use or to give away acquired from other economies by residents during visits to these other economies."

In the earning reports of global luxury brands….

“The luxury consumptions have been affected by a general economic slowdown and the spending patterns of Chinese customers have been influenced by ‘anti-extravagance campaign’” *(Carlo Mazzi, Chairman of Prada in presentation to investors on 2014 performance)*

“The economic situation on the Chinese market remains negative and consequently, in financial year 2015, the Asia Pacific area as a whole recorded a 4.4% revenue decrease at current exchange rates and a 16.1% decrease at constant exchange rates.” *(Prada earning statement, April 2016)*

“A significant proportion of the Group’s sales are to Chinese consumers globally. Consequently, any change to Chinese consumer tastes or the economic, regulatory, social and/or political environment in China could adversely impact this consumer’s disposable income, confidence and travel which could impact the Group’s revenue and profits.” *(Burberry Earning Report, 2016, on revenues being down 4% in 2016Q2-Q3)*

Mainland travel spending in the news

Hong Kong and Taiwan: "Tax-free spending in Asia is declining, dragged by lower average tourist spending [due to] negative macroeconomic conditions." The biggest sales declines in October have happened in Hong Kong (down 29%), Taiwan (20%) as shopping by mainland Chinese was 17% lower compared to a year ago. That means that even though mainland Chinese are still traveling in droves, they aren't spending as much as before, preferring more value-driven tours and spending less on big-ticket items. *(Global Blue, a company which tracks travelers' tax refunds, November 25, 2016)*

France, Italy, the U.K., Germany : "Total sales in France, Italy, the U.K., Germany and Singapore…dropped 3 percent on quarter in value…The drops are not down to a reduction in tourist numbers, but a decrease in average spend per transaction,"….. spending by the Chinese – who accounted for 27 percent of all tax free shopping last year – rose only 9 percent in the second quarter compared with quarterly rises of between 30 and 50 percent seen in recent years… China's economy – which enjoyed double digit growth rates prior to the financial crisis – has slowed in recent years." *(August 14, 2014, CNBC)*

Japan: "It has also been reported that the aggressive shopping spree by Chinese tourists, who typically bought expensive household electronics products, jewelry and cosmetics in large volumes, has run its course. Spending by the average Chinese tourist in the April-June quarter fell 23 percent." *(September 19, 2016, The Japan Times)*

Singapore: Singapore's recent Chinese tourist growth has come with many strings attached that indicate that the growth mostly comes down to a shift toward short-staying, budget-conscious Chinese travelers…with Chinese tourists' average expenditure on hotels down by 40 percent since 2014 *(October 10, 2016, Jing Daily)*

Research Questions

- How much of the reported travel imports are actually financial outflows?
- What are the implications for external rebalancing?

Roadmap

- Methodology and Data
  - Three measures of mis-recorded travel imports
- Results and Discussion
  - Comparison with other sources of recorded and unrecorded outflows
  - Behavior of the “mis-recorded travel imports”
  - Implications for measurement of China’s current account and external rebalancing
- Where are the outflows?
- Conclusions

Preview of Results

- Financial outflows mis-recorded as travel imports are 1-1.5 percent of GDP in 2015 and is about a fifth to a quarter of recorded private financial outflows.
- These abnormal “travel imports” respond to economic forces in ways that behave more like financial outflows rather than goods and services imports.
- China’s current account corrected for these concealed outflows is higher than official statistics would suggest.
- External rebalancing has partially or completely reversed, depending on the denominator.
- The resurgence of surplus savings in China is driven by rising saving-investment gap of Chinese corporates since 2012
- Internal rebalancing may so far have inadvertently reversed progress on external rebalancing.
- Circumstantial evidence suggests that large portion of China’s outflows have found its way into the United States.

Three measures of mis-recorded travel imports

1. Simple arrival-based measure
2. Counterparty/Mirror approach
3. Travel expenditure regression model

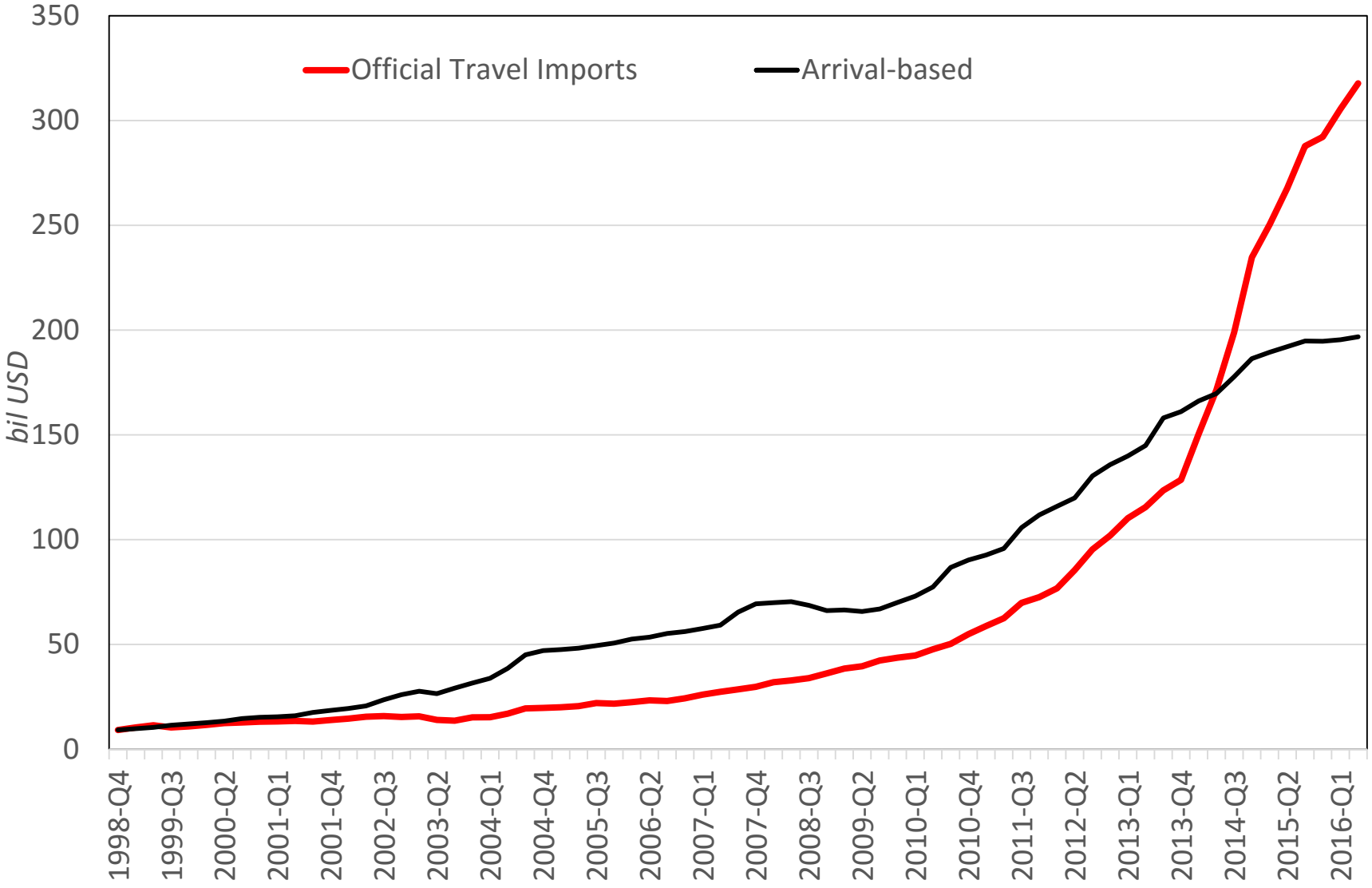
Three measures of hidden outflows

1. Simple arrival model
   - Reconstruct China's travel imports from growth in Chinese departures

$$\widehat{O_{1t}} = M_{Ct} - M_0 \prod_{i=1}^{t} (1 + \Delta\, lnN_i)$$

   - Assume is 1-on-1 growth in travel expenditure vs. departures, or expenditure per traveler stays constant
   - In reality growth in spending per traveler tends to be negatively correlated with departures; measure therefore is conservative measure.
   - Data requirement: Mainland traveler arrival data at 19 destinations, available in national tourism board sources. Coverage for 2015: 90 percent.

Gap between reported travel imports and derived imports = $97 billion in 2015 (1% of GDP)



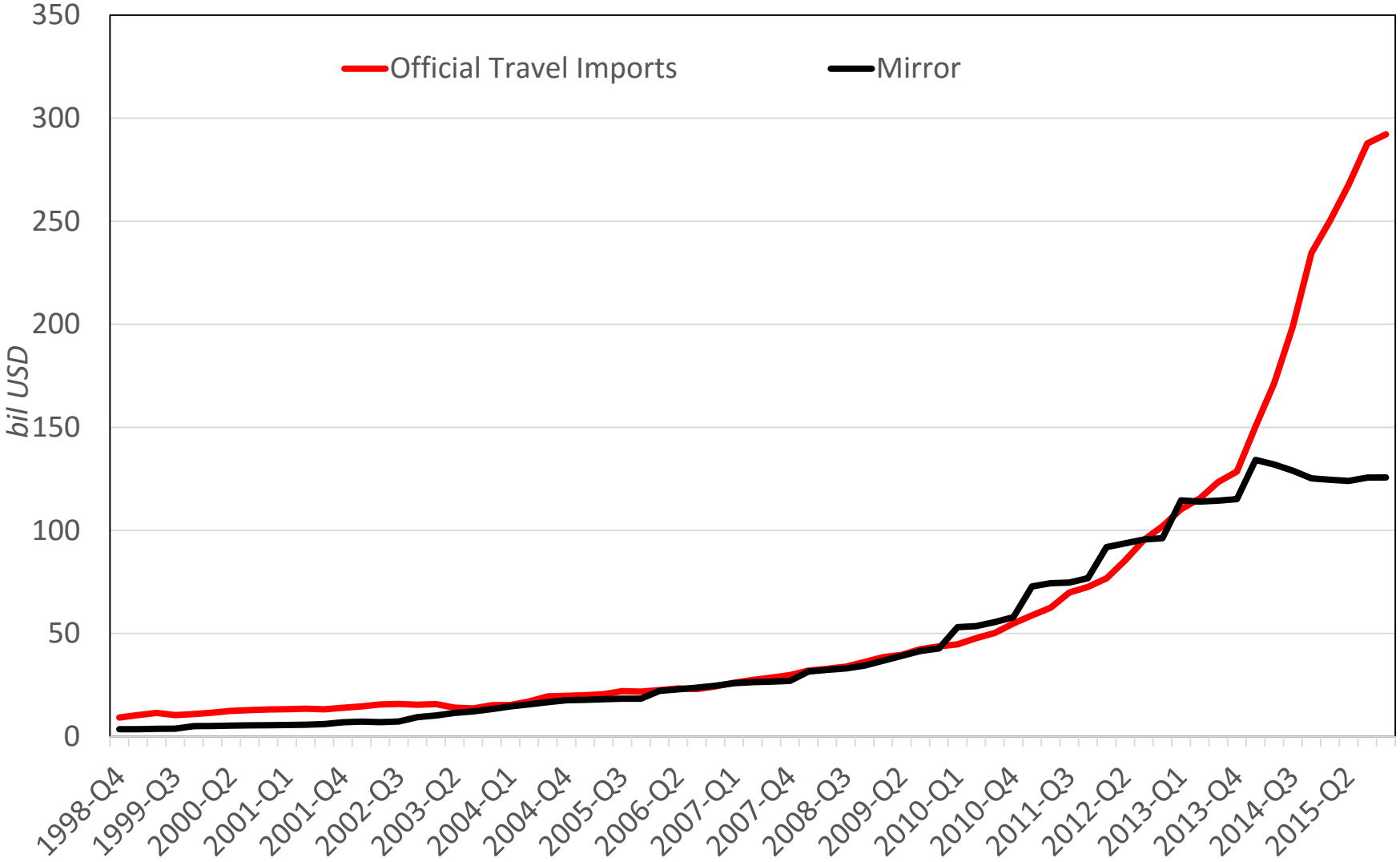
Three measures of hidden outflows

2. Counterparty/Mirror approach
   - Similar to trade mis-invoicing studies: Cheung, Steinkamp, Westermann, 2015; Claessens and Naude, 1993; Kar and Freitas, 2012; Schindler and Beckett, 2005
   - Reconstruct China's travel imports from travel exports of 19 individual destination (90% of all outbound destinations)
   - Unrecorded flows through travel is the difference between China's reported travel imports and the sum of the constructed travel exports to China across destinations

$$\hat{O}_{2t} = M_C - \sum_{d}^{K} e_d \times A_{dCt}$$

   - Data requirement: Chinese traveler arrivals and average expenditure per traveler per destination

Gap between reported travel imports and derived imports = $165 billion in 2015



Three measures of hidden outflows

3. Travel expenditure model measure
   - Estimate China's travel imports by fitting travel expenditure data on change in real effective exchange rates, outbound departures growth, change in real GDP per capita, level of GDP per capita.
   - Panel regression specification:

$$\triangle\, lnM_{kt} = \alpha_1 \triangle\, lnN_{kt} + \alpha_2 \triangle\, lnREER_{kt} + \alpha_3 \triangle\, lnRealGDPpercapita_{kt} +$$

$$\alpha_4 \ln(GDPpercapita_{kt}) + \mu_k + \Upsilon_t + \varepsilon_{kt} \qquad (1)$$

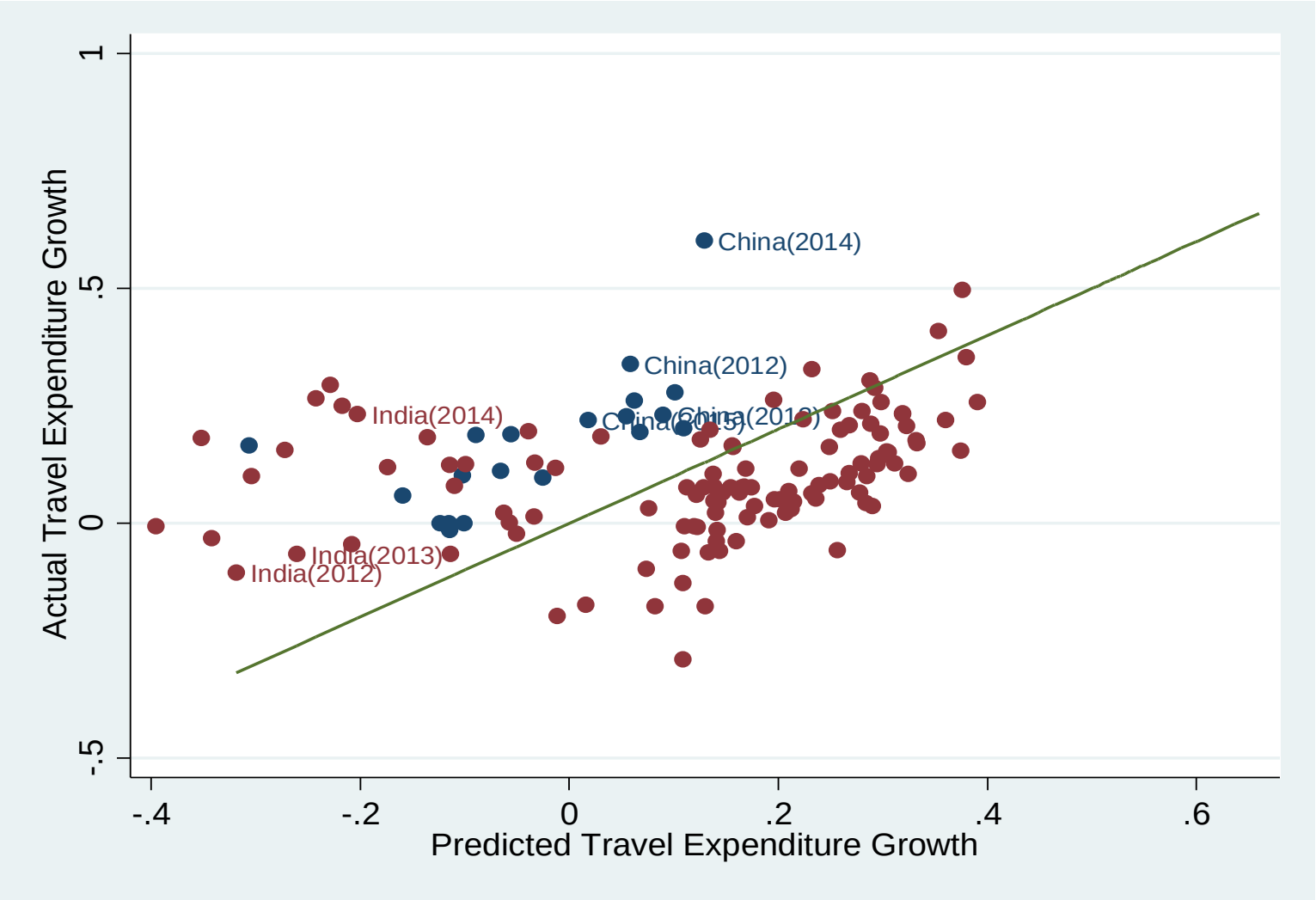
   - Data requirement: travel expenditure and departures data from UN World Tourism Organization, 1995-2014 for G20 countries

Travel Expenditure Regression Results

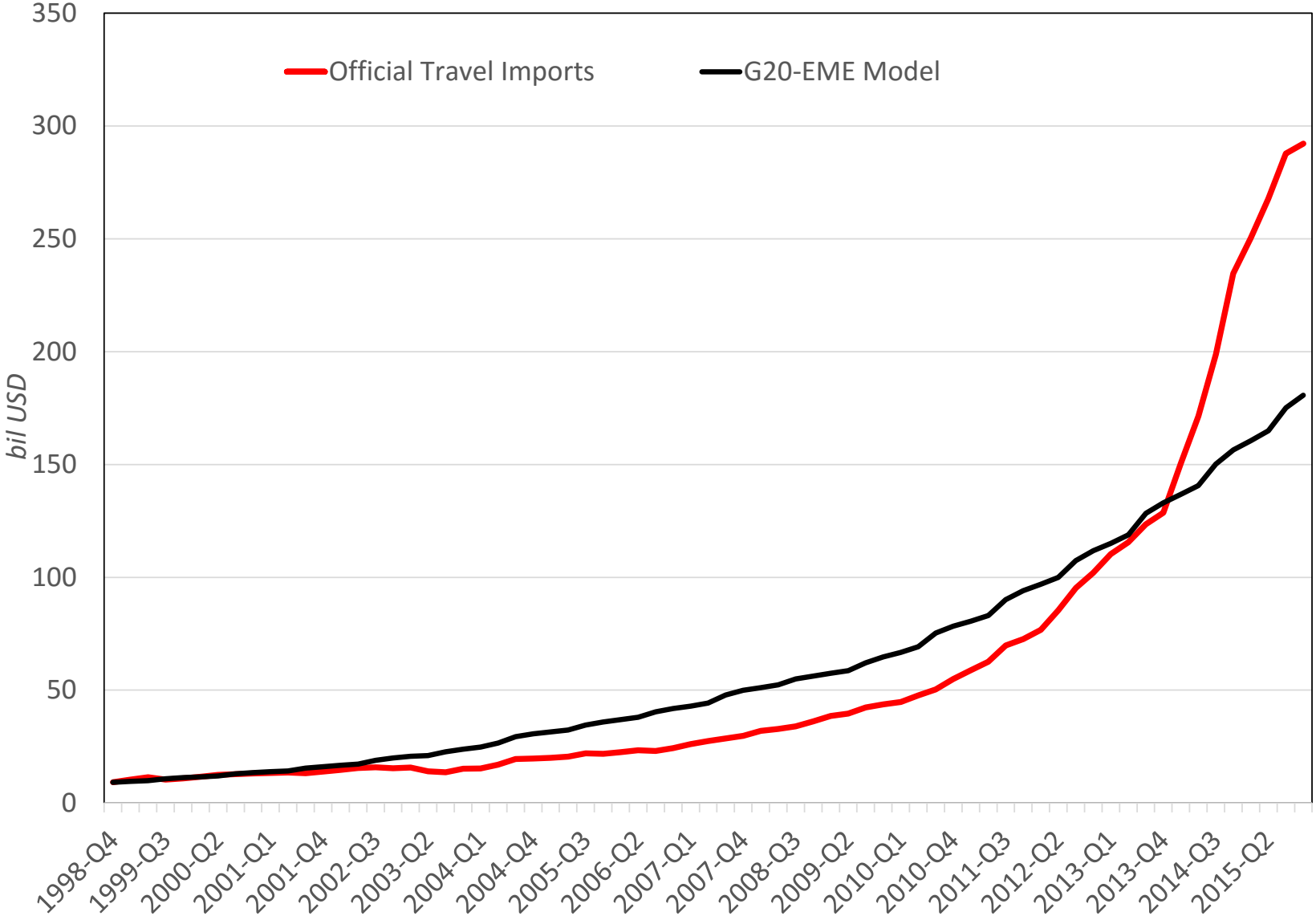
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Advanced Countries					Emerging Market Economies				
Ln(departures) change	0.585***	0.447***	0.400***	0.401***	0.439***	0.308***	0.333***	0.333***	0.331***	0.407**
	(0.13)	(0.12)	(0.11)	(0.12)	(0.09)	(0.07)	(0.04)	(0.04)	(0.05)	(0.18)
Ln(REER) change		0.844***	0.802***	0.820***	0.963***		0.461***	0.468***	0.471**	0.429***
		(0.09)	(0.07)	(0.08)	(0.13)		(0.10)	(0.12)	(0.13)	(0.16)
Real GDP per capita growth chg			0.975**	1.043**	1.263***			-0.071	-0.065	0.864***
			(0.41)	(0.39)	(0.32)			(0.34)	(0.31)	(0.32)
Ln(GDP per capita)				-0.224*	0.050*				-0.032	0.011
				(0.13)	(0.03)				(0.19)	(0.02)
Constant	0.029	0.017	0.001	2.349*	-0.515*	0.161***	0.116	0.119	0.396	-0.069
	(0.02)	(0.02)	(0.02)	(1.31)	(0.29)	(0.05)	(0.07)	(0.08)	(1.66)	(0.14)
Observations	183	180	162	162	162	684	116	116	116	116
Number of country_id	16	15	14	14		60	7	7	7	
Adjusted R-squared	0.631	0.759	0.768	0.771	0.549	0.144	0.561	0.557	0.552	0.498
Country FE	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

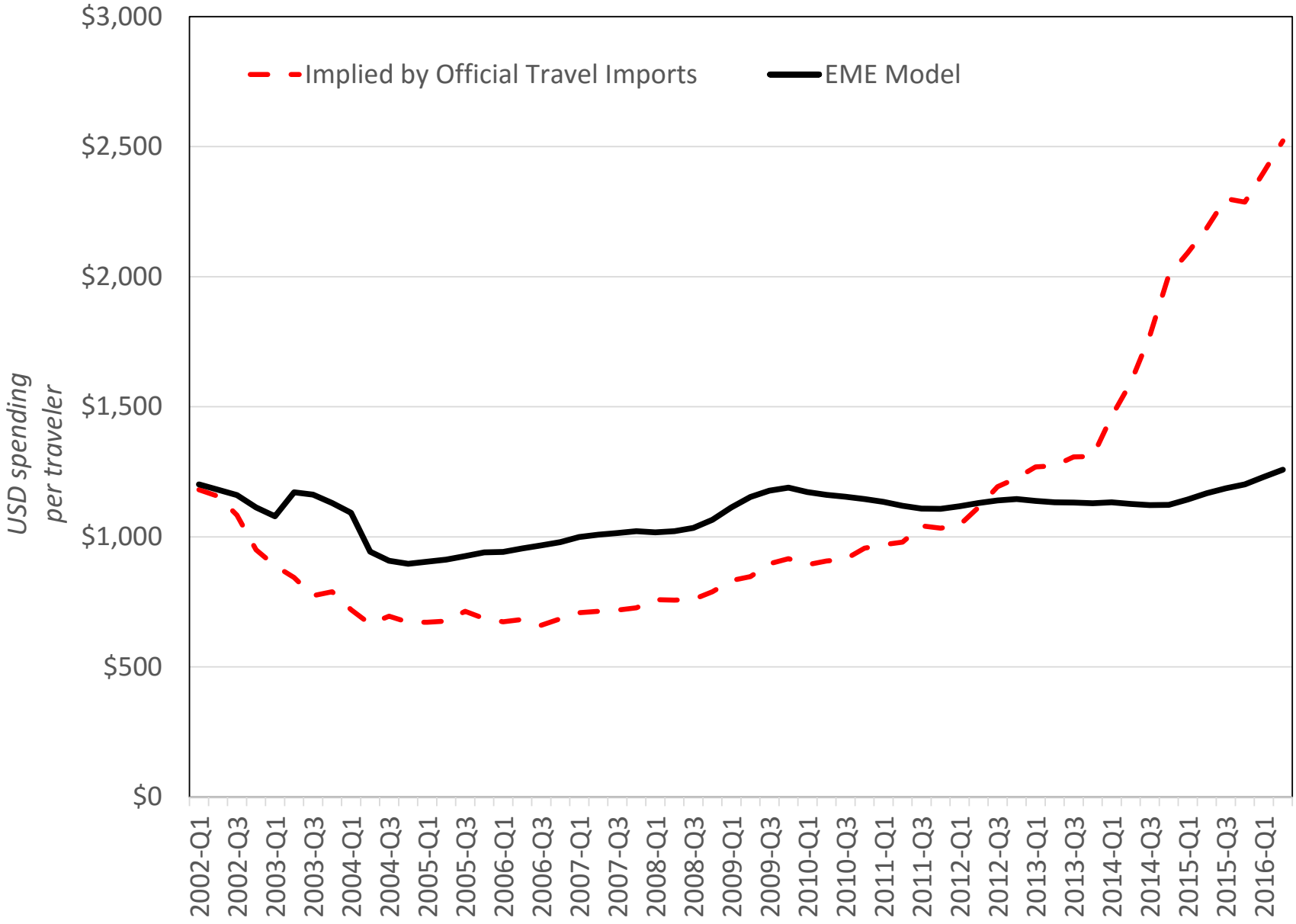
Model Fit


Actual Travel Expenditure Growth
1
.5
0
-.5
-.4
-.2
0
.2
.4
.6
Predicted Travel Expenditure Growth
China(2014)
China(2012)
India(2014)
China(2015)
China(2016)
India(2013)
India(2012)

Gap between reported travel imports and derived imports = $140 billion in 2015



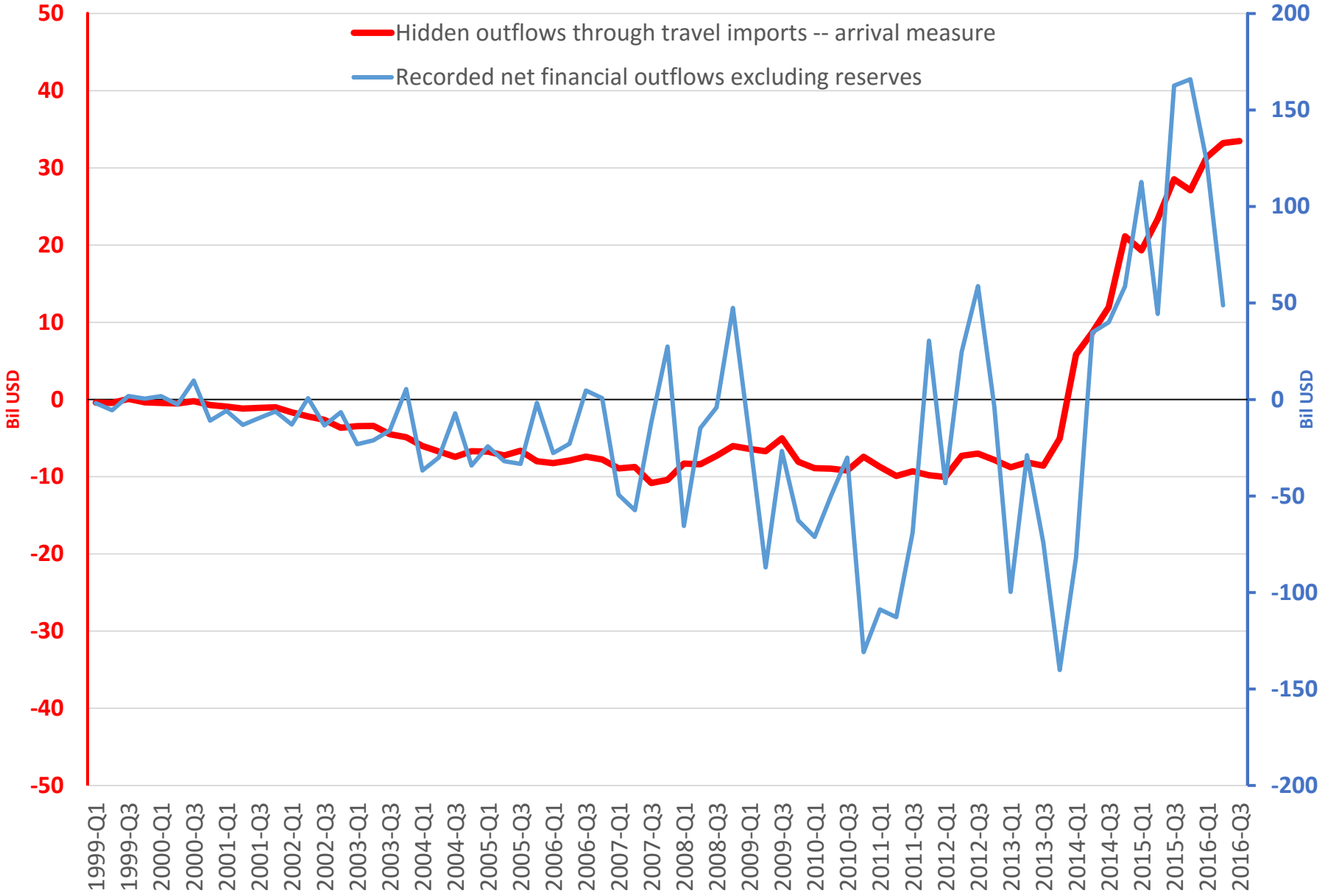
Average Travel Expenditure Per Mainland Traveler



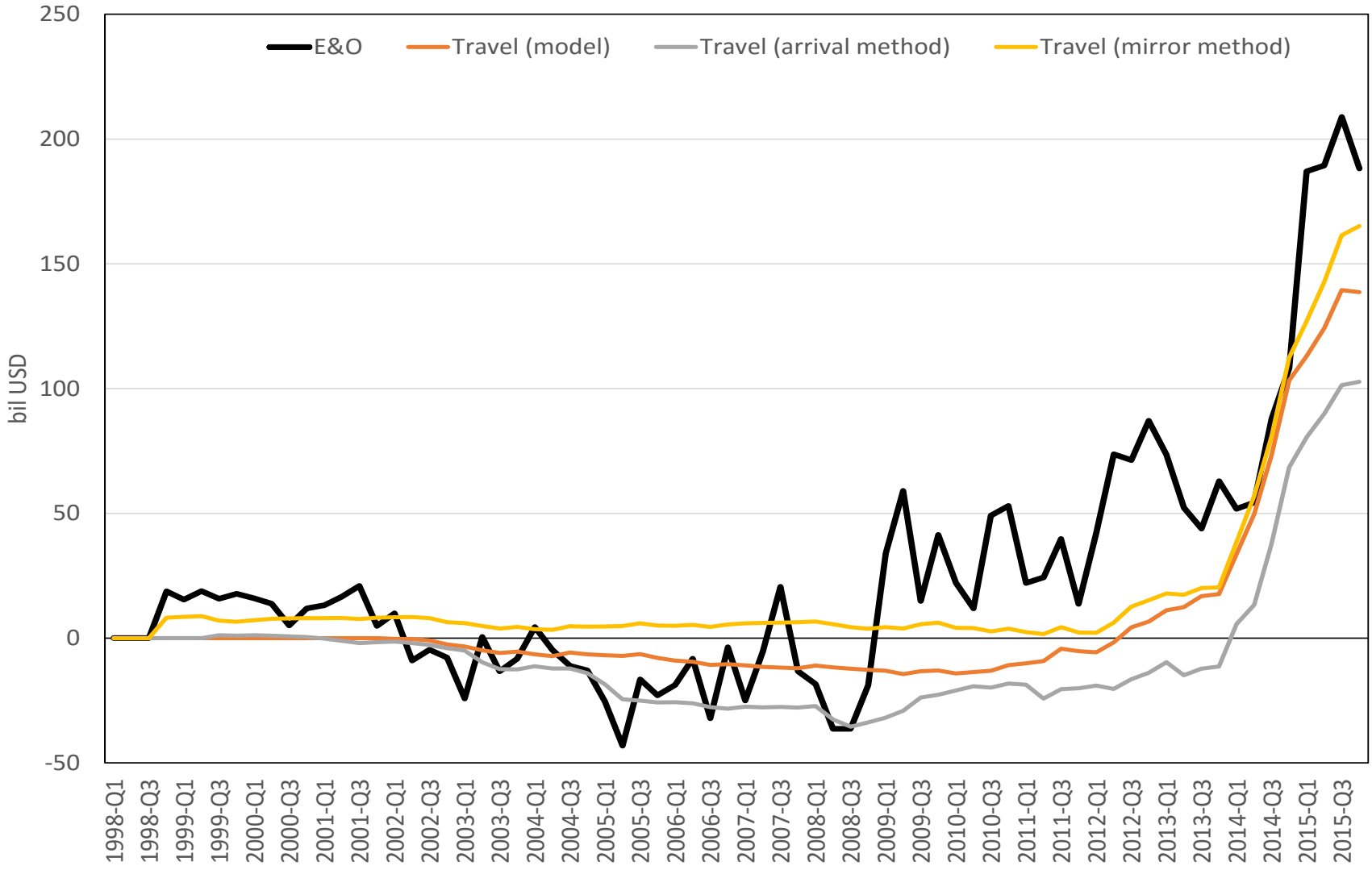
How do they compare to other measures of outflows?

- Recorded net private capital flows
- Errors and Omissions
- Compare to imports over-invoicing vis-à-vis US (another well-documented capital flight channel)

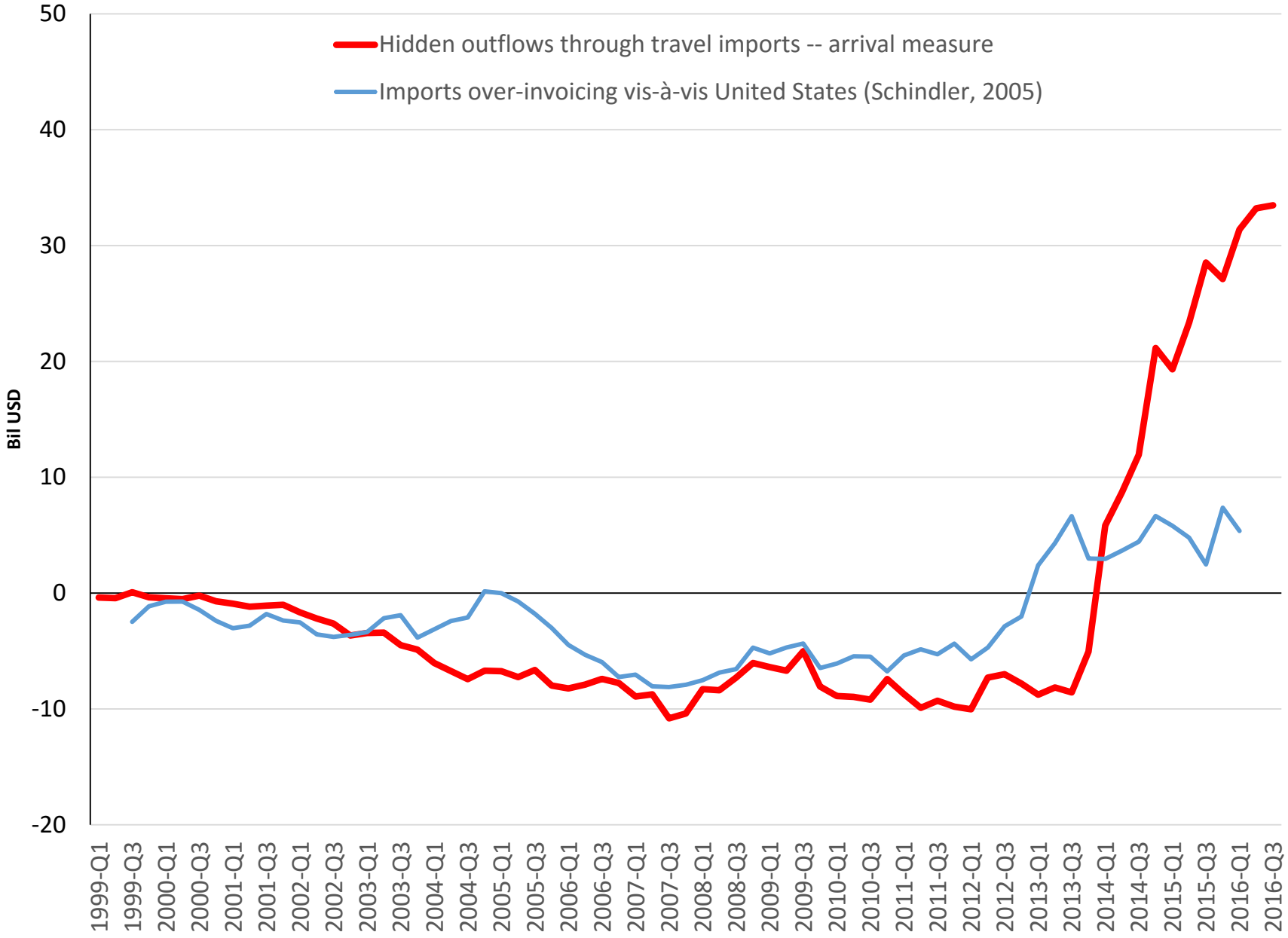
Compare to Recorded Net Financial Outflows



Compare to Errors and Omissions



Compare to Imports over-invoicing vis-à-vis US



Behavior of the "abnormal" travel imports

- Similar to Clark, Converse, Coulibaly, and Kamin (2016), I estimate a regression relating each of the misrecorded travel imports measures and other recorded financial flows to a range of macroeconomic fundamentals, monetary, and China-specific and global risk factors.

$$\frac{Flow_t}{GDP_t} = \beta_1 Growth_t + \beta_2 \Delta 2yrNDF_t + \beta_3 \Delta 2yrNDF_t * \left(\frac{2yrNDF_t - Spot_t}{GDP_t}\right) + \beta_3 (i - i*)_t$$

$$+\beta_4 EMBIG_t + \beta_5 {EMBIG_t}^2 + \beta_6 VIX + constant + \mu_t$$

- 6 types of financial outflows as dependent variables:
  (1) private financial flows as recorded in the financial account
  (2) errors and omissions in the financial account
  (3) imports mis-invoicing vis-à-vis the United States (Schindler, 2005)
  (4) abnormal travel flows estimated by the arrival measure
  (5) abnormal travel flows estimated by the mirror method, and
  (6) abnormal travel flows estimated by the travel expenditure model

Behavior of the "abnormal" travel imports

VARIABLES	(1) Recorded private financial outflows	(2) Errors & Omissions	(3) Imports Over-invoicing	(4) Travel (arrival)	(5) Travel (mirror 1)	(6) Travel (model)
Growth	-0.366**	-0.166*	-0.020***	-0.134***	-0.130***	-0.118***
	(0.17)	(0.09)	(0.00)	(0.02)	(0.02)	(0.02)
2-yr USD/RMB NDF Chg	-0.758***	0.037	-0.021***	-0.050	-0.081**	-0.067**
	(0.16)	(0.07)	(0.00)	(0.03)	(0.03)	(0.03)
NDF chg X (fwds-spot/spot)	0.053*	-0.020*	0.002***	0.004	0.008**	0.008***
	(0.03)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
i-i*	-0.650	0.140	0.063***	0.093	-0.038	0.072
	(0.39)	(0.20)	(0.01)	(0.07)	(0.06)	(0.06)
EMBIG spreads	0.068*	0.002	-0.002**	0.014**	0.010	0.009
	(0.04)	(0.02)	(0.00)	(0.01)	(0.01)	(0.01)
EMBIG spreads^2	-0.000	-0.000	0.000*	-0.000**	-0.000**	-0.000*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
ln_vix	-1.367	0.507	-0.127***	-0.421*	-0.569**	-0.753***
	(1.15)	(0.62)	(0.03)	(0.23)	(0.22)	(0.19)
Constant	35.085*	14.835	2.327***	12.745***	14.582***	13.037***
	(17.79)	(8.88)	(0.46)	(2.23)	(2.52)	(2.30)
Observations	50	50	49	51	51	51
R-squared	0.631	0.235	0.624	0.763	0.667	0.742
Adjusted R-squared	0.569	0.107	0.560	0.725	0.612	0.700

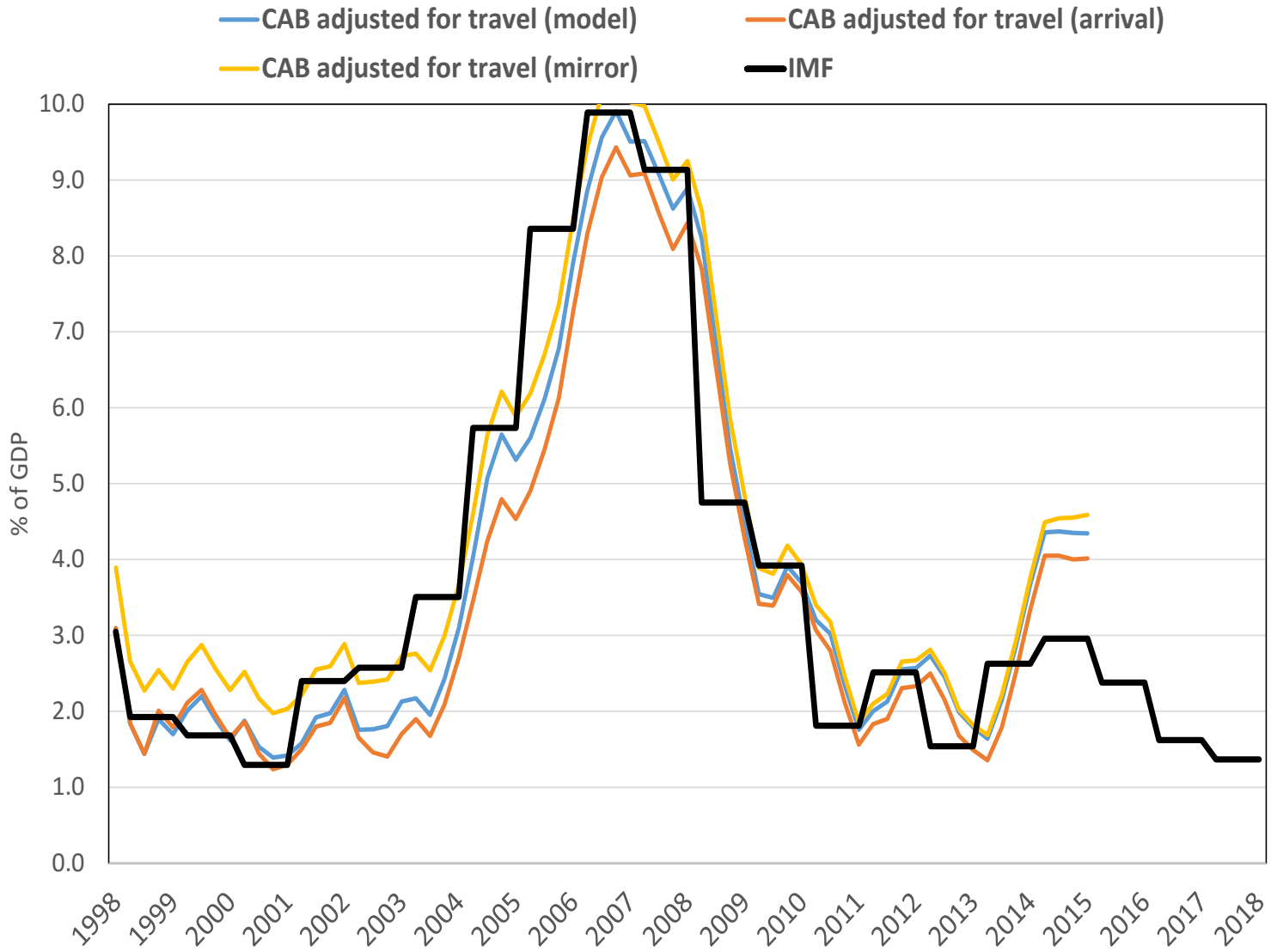
Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

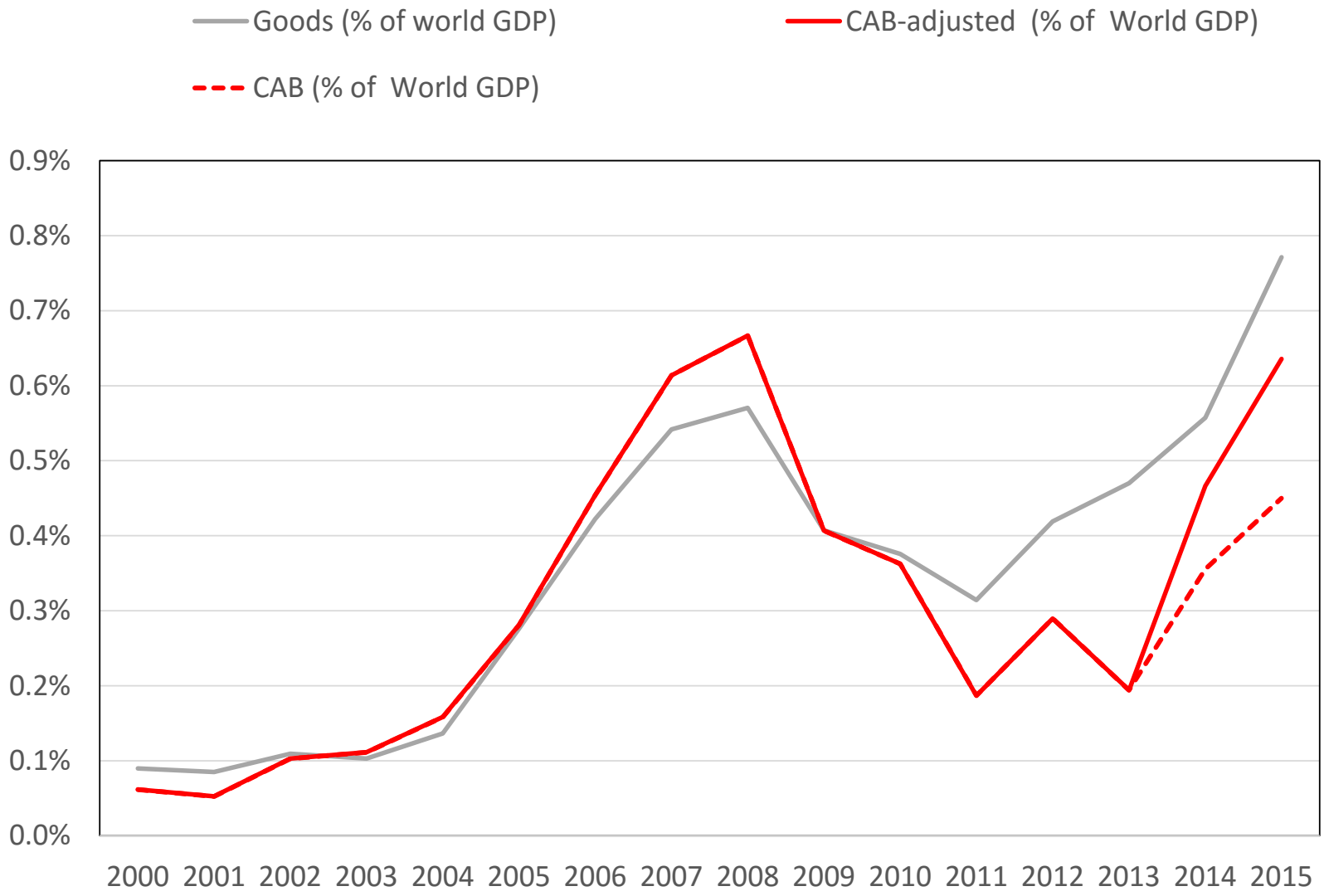
Implications for China's Current Account

- The measured abnormal travel outflows behave more like financial flows than normal goods and services imports
- These outflows should not be recorded as debit in the current account, and should be recorded as a financial account outflow.
- Corrected, China's current account surplus and private financial outflows would be 1-1.5 percent of China's GDP higher than what official statistics would suggest in 2015.

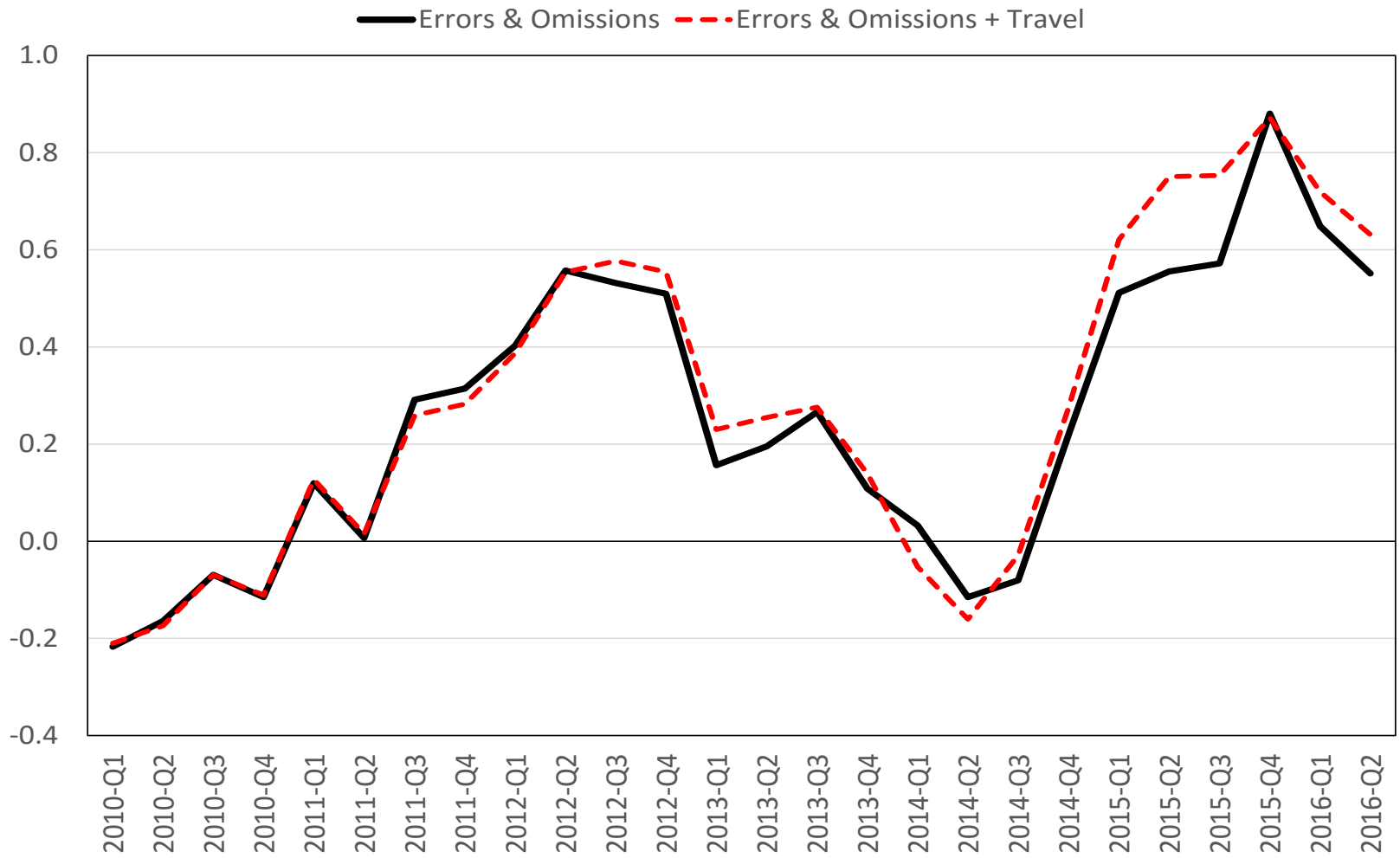
Adjusted current account balance indicates a sharp upward trajectory since 2013



China's current account surplus as a share of world's GDP has returned to previous peak



Correlation between U.S. Inflows and China Outflows in Errors and Omissions



*8-quarters rolling correlations

Conclusions

- China's reported current account conceals capital exodus
- Corrected for the mis-recorded travel imports, China's current account surplus a share of own GDP has been on upward trajectory since 2013.
- As a share of world's GDP, China's adjusted current account surplus has returned to just below the pre-global financial crisis heights.
- Different underlying reasons for the increase in China's current surplus versus pre-2008:
  - Financed by private outflows (now) vs. official outflows, i.e. reserve accumulation (pre-2008).
  - Slowing growth and depreciation pressure vs. exports-driven robust growth and appreciation pressure
  - Rising saving-investment gap by corporates (internal rebalancing) vs. rising household savings-investment gaps (pre-2008)
- If the Chinese official sector is no longer purchasing foreign reserves to hold down the renminbi, does it mean that an increase in China's current account surplus should no longer warrant as much international concern as in the pre-global financial crisis period?
- Large excess savings from China have impact on recipient countries, i.e. the United States