



Delegation of the European Union to Japan
駐日欧州連合代表部

ECGI Asia Dialogue, Corporate Governance And The Public Interest

Tokyo, Japan

July 8, 2016



european corporate governance institute



EU ASIA CORPORATE GOVERNANCE DIALOGUE

Rise Of The Fiduciary State: A Survey Of Sovereign Wealth Fund Research



Bill Megginson

Professor & Price Chair in Finance

University of Oklahoma

Saudi Aramco Chair in Finance

King Fahd University of Petroleum & Minerals

Scientific Advisor, Privatization Barometer

www.privatizationbarometer.net



Where We Are Heading?

Talk Will Address Several Issues

- 1. What Are Sovereign Wealth Funds, How Are They Funded, And How Much Do They Invest?**
- 2. What Caused SWFs' Rapid Rise To Global Financial Prominence, And Why Does This Cause Concern?**
- 3. Survey Research Examining How SWFs Select Assets, Industries, Countries In Which To Invest.**
- 4. Survey Research Examining The Impact Of SWF Equity Investments On Target Firms?**
- 5. What Are The Lessons And Unresolved Questions Of Sovereign Wealth Fund Research?**

What Are Sovereign Wealth Funds?

How Are They Funded, And How Much Do They Invest?



Sovereign Wealth Fund Definitions Vary—And Variations Matter

- **Term Was Coined Only Recently (Razanov, 2005)**
 - First SWF: Kuwait Investment Authority, 1953
- **Can Be Defined Very Broadly, As In Truman (2008):**

“A separate pool of government-owned or -controlled financial assets that includes international assets.”
- **Or More Narrowly As State-Owned Investment Funds, By Sovereign Wealth Fund Institute (www.swfiinstitute.org)**
 - 61 funds with AUM of \$7,257 Bn, July 2016
- **Or Very Narrowly, By Sovereign Investment Laboratory**
 - 35 funds with AUM of \$5,759 Bn, February 2016
 - Definition precludes HKMA, China’s SAFE

The Sovereign Investment Landscape

Official Reserves/ Central Bank <ul style="list-style-type: none"> External assets for directly financing international payment imbalances Highly liquid, often OECD government bonds 	Stabilization Funds <ul style="list-style-type: none"> Funds to insulate budget and economy from excess volatility, inflation, Dutch disease, & other macro-economic threats Low-risk, liquid assets: cash government bonds 	Pension Funds <ul style="list-style-type: none"> Investment vehicles to meet government's future pension obligations Funded and denominated in local currency Explicit liabilities 	Sovereign Wealth Funds <ul style="list-style-type: none"> Sovereign owned Independent Limited explicit liabilities Investing for commercial return Significant investment abroad 	Domestic Development Funds <ul style="list-style-type: none"> Owned by national or sub-national governments Focus on domestic investment Private equity style 	State Owned Enterprises <ul style="list-style-type: none"> Companies in which the state has significant control May make investments in foreign assets
EXAMPLES					

<ul style="list-style-type: none"> State Administration of Foreign Exchange (China) Saudi Arabia Monetary Agency 	<ul style="list-style-type: none"> Economic and social Stabilization Fund (Chile) Pula Fund (Botswana) Oil Stabilisation Fund (Iran) 	<ul style="list-style-type: none"> California Public Employees' Retirement System (US) National Pension Service (Korea) 	<ul style="list-style-type: none"> Abu Dhabi investment authority Government of Singapore Investment Corp. Qatar Investment Authority China Investment Corporation 	<ul style="list-style-type: none"> National Development Fund of Iran Russian Direct Investment Fund Fondo Strategico Italiano Samruk-Kazynu (Kazakhstan) 1Malaysia Development Fund 	<ul style="list-style-type: none"> CNOOC (China) Gazprom (Russia) SABIC (Saudi Arabia)
--	---	---	--	--	---

INVESTMENT RISK 

Will Use the Sovereign Investment Laboratory's Definition of SWF

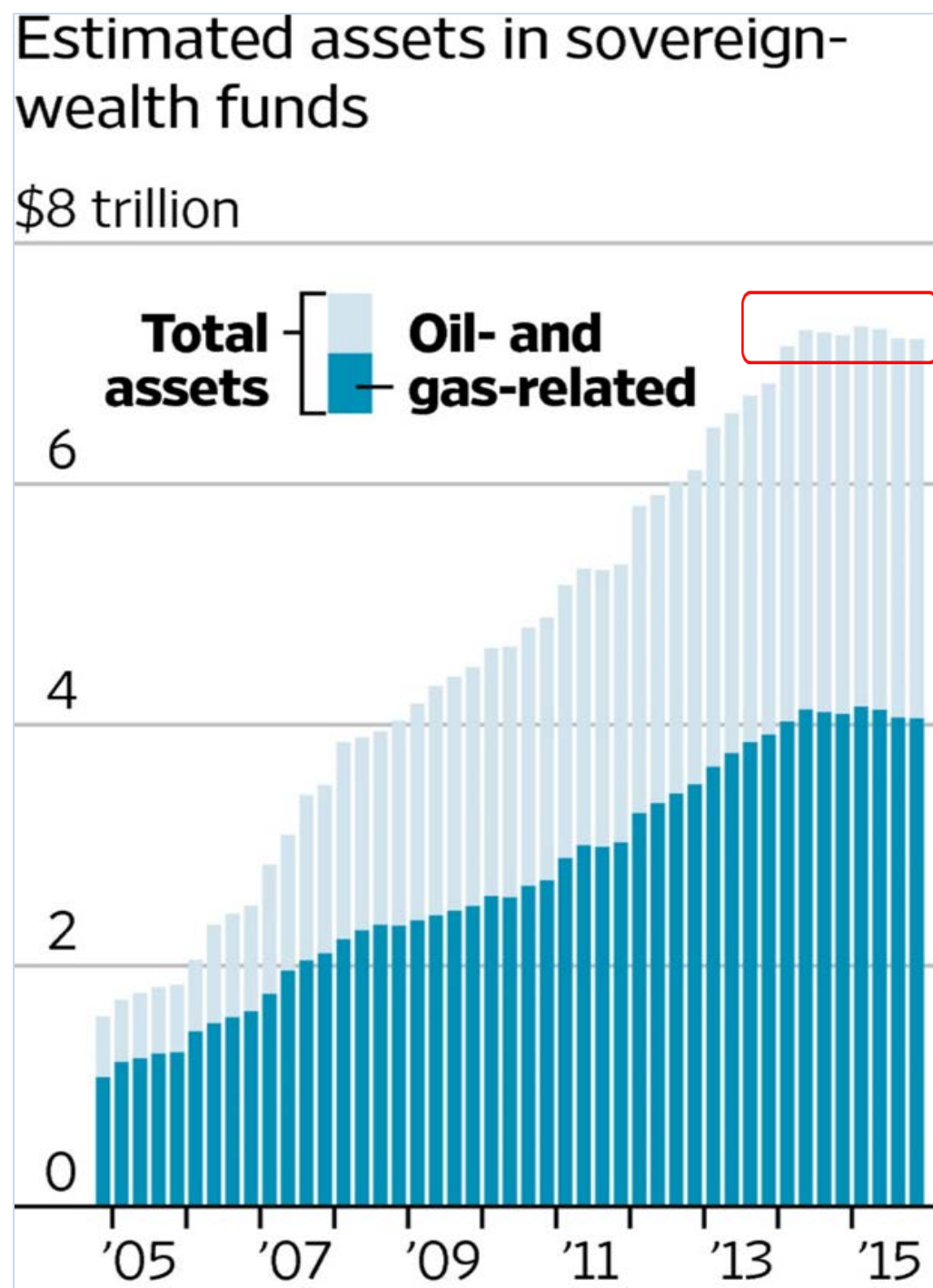
- **SIL Defines A Sovereign Wealth Fund As A State-Owned Investment Vehicle Meeting Five Criteria. Must Be:**
 1. An investment fund, not an operating company,
 2. Wholly owned by a sovereign government, but separated from central bank or finance ministry,
 3. That makes international and domestic investments in a variety of risky assets,
 4. Is charged with seeking a commercial return, and
 5. Is a wealth fund rather than a pension fund.
- **Even This Must Be Modified for UAE Funds, Since These Are Organized at Emirati Level**
- **Two-Thirds Oil-Funded; Two-Thirds Started Since 2000**

Sovereign Wealth Funds Data (SIL Classification)

Largest Funds And Total AUM (February 29, 2016)

Country	Fund Name	Launch Year	Source of Funds	AUM US\$ Bn
Norway	Government Pension Fund – Global	1997	Commodity (Oil)	\$824.9
UAE-Abu Dhabi	Abu Dhabi Investment Authority †	1976	Commodity (Oil)	773.0
China	China Investment Corporation	2007	Trade Surplus	746.7
Saudi Arabia	Saudi Arabian Monetary Authority Foreign assets	1963	Commodity (Oil)	623.3
Kuwait	Kuwait Investment Authority †	1953	Commodity (Oil)	592.0
Singapore	Government Investment Corp†	1981	Trade Surplus	344.0
Qatar	Qatar Investment Authority†	1974	Commodity (Oil)	256.0
China	National Social Security Fund	2000	Trade Surplus	236.0
Singapore	Temasek Holdings	1974	Trade Surplus	193.6
UAE-Dubai	Investment Corporation of Dubai	2006	Commodity (Oil)	183.0
Russia	National Wealth & Reserve Funds	2006	Commodity (Oil)	139.2
UAE-Abu Dhabi	Abu Dhabi Investment Council	2005	Commodity (Oil)	110.0
Australia	Australian Future Fund	2006	Non-Commodity	95.0
Korea	Korea Investment Corporation	2006	Trade Surplus	91.8
Kazakhstan	Kazakhstan National Fund†	1983	Commodity (Oil)	77.0
Total AUM, All 35 Funds				\$5,758.9

† Estimate



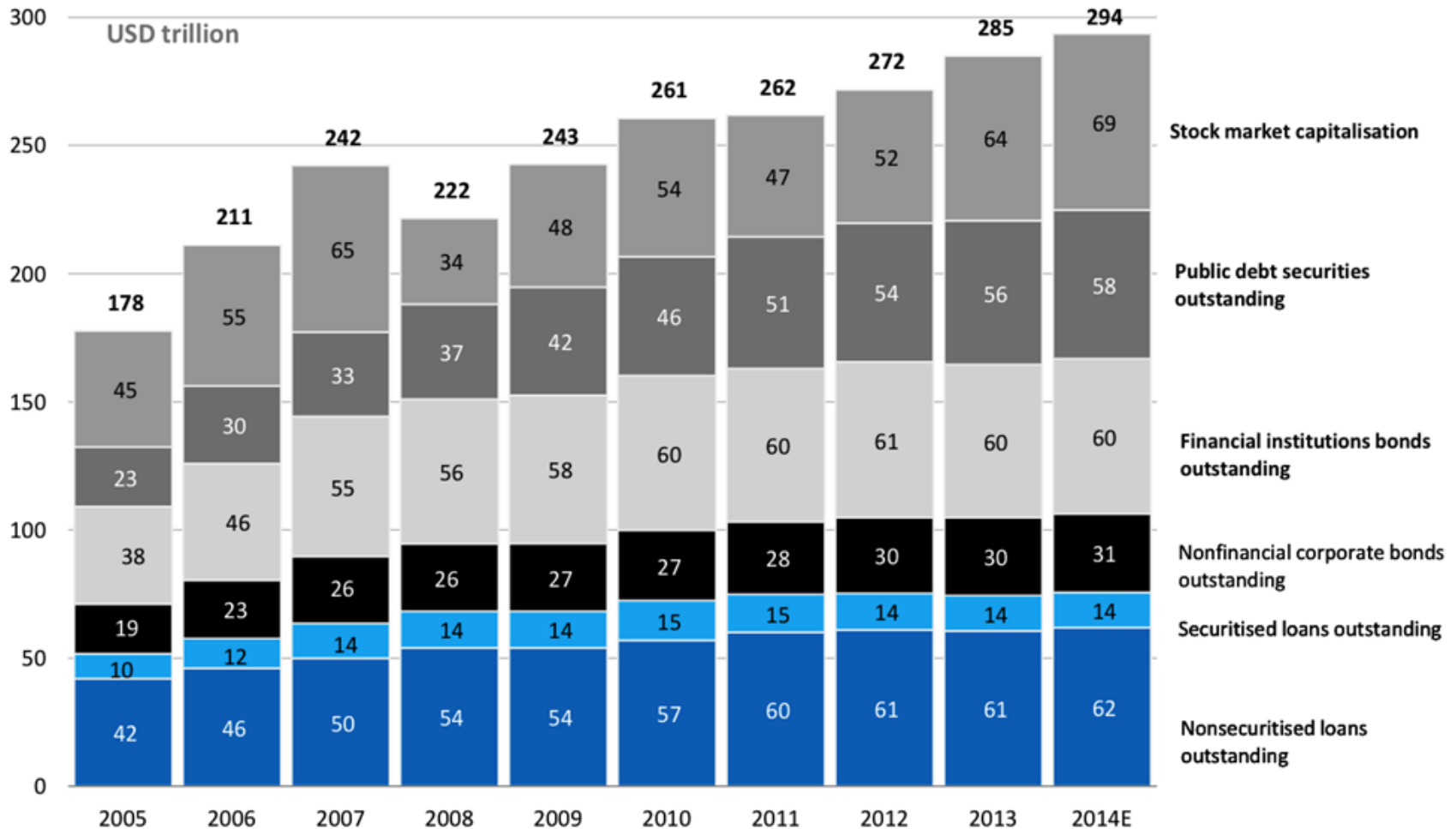
SWF Assets Grew Rapidly Until 2014, Then Levelled Off

But Little Actual Contraction Since 1H2014

Source: Sovereign Wealth Fund Institute, Reported in *Wall Street Journal* (Dec 22, 2015)

Though Absolutely Large, SWFs' AUM Only Small Fraction of Global Financial Assets (\$294 trn)

Figure 1: Stock of Global Financial Assets



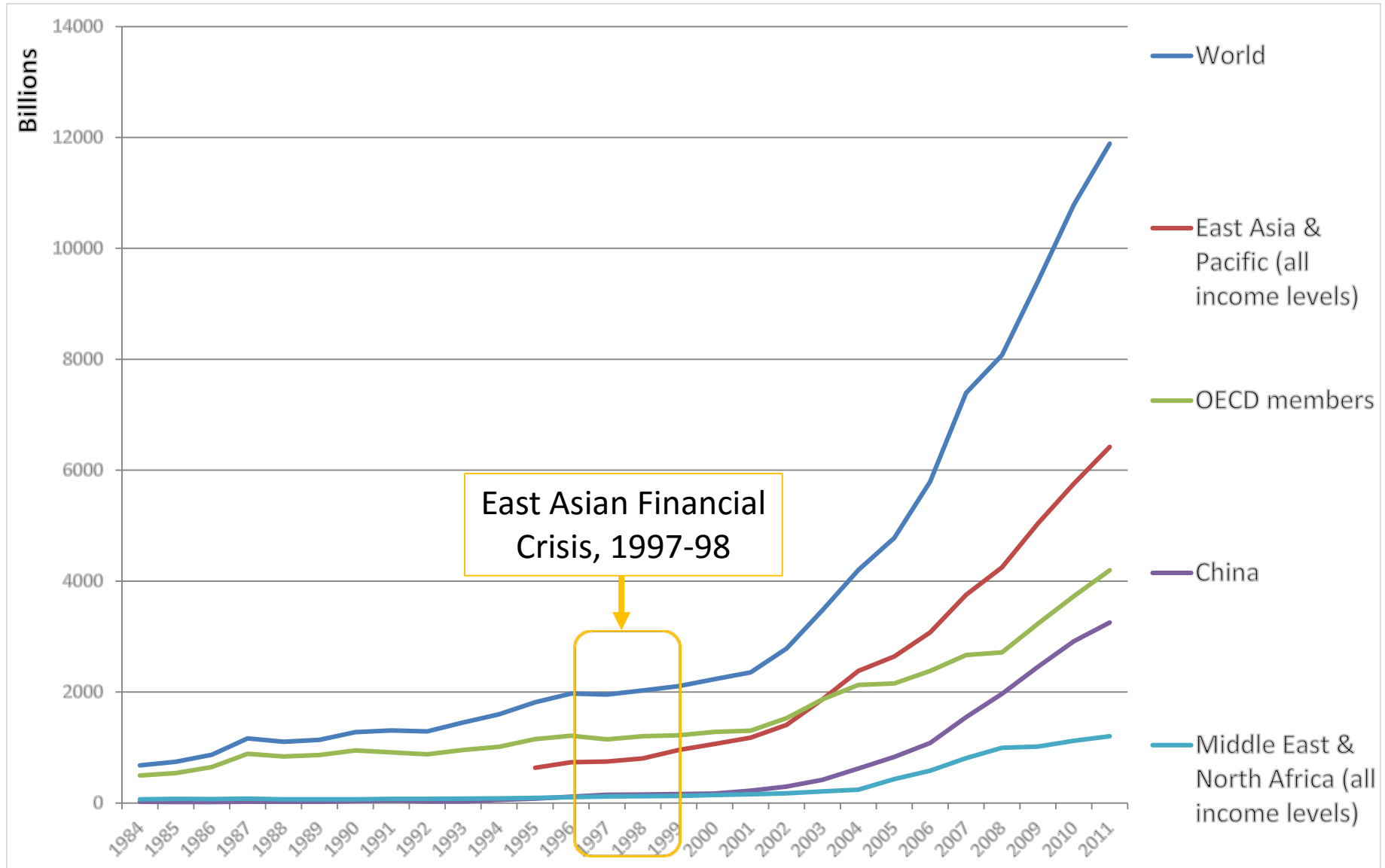
Source: McKinsey Global Institute, Haver, BIS, Deutsche Bank estimates

What Caused Sovereign Wealth Funds' Rise To Prominence?

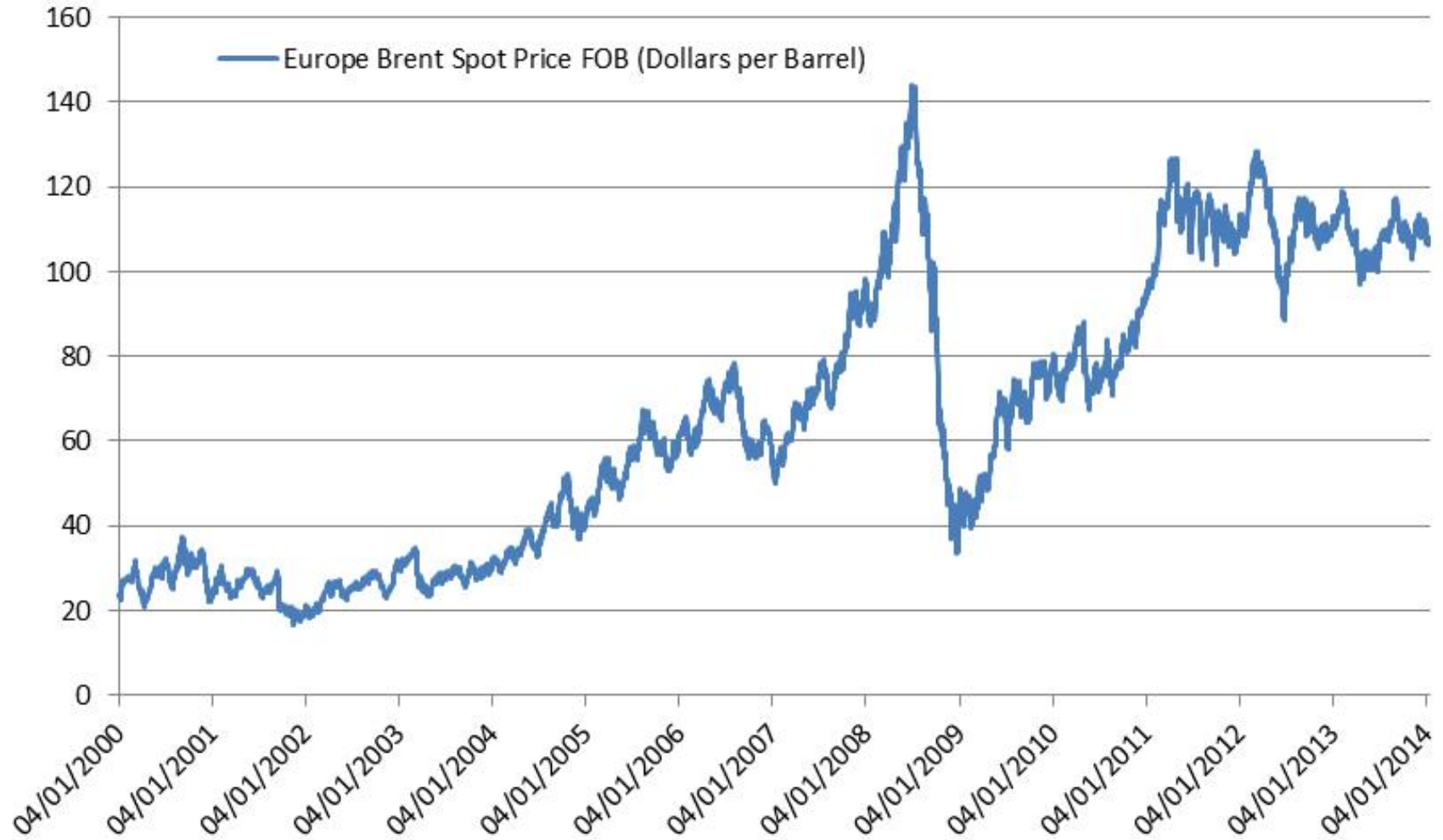
Massive Accumulation Of Forex Reserves, Rising Oil Prices, New Resource Discoveries



Foreign Exchange Reserves Reached Massive Levels: Total Value \$12.618 Trillion YE 2013 (World Bank)



Quadrupling Of Oil Prices After 2002 Provided Funding For Oil-Based SWFs—Until 3Q2014



Source: Thomson Reuters

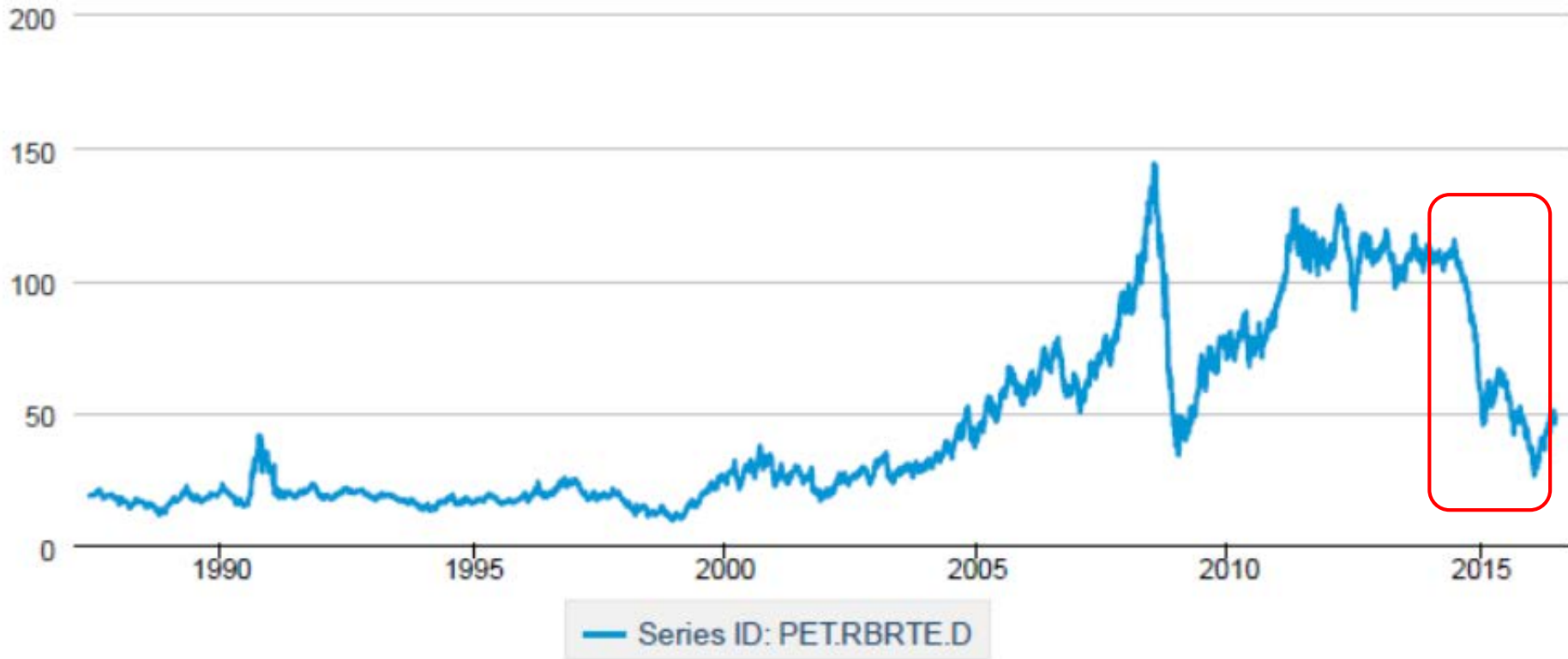
Setting Up SWF Became Reflexive Response When A Nation Found New Mineral Wealth

- **70 Countries Founded SWFs After 2005 (SWF Institute)**
 - Includes now-huge funds of China, Russia, Australia
 - Newer funds in Nigeria, Angola, Ghana
- **Identify Over 25 Countries Proposing SWFs Since 2008**
 - First response when major new oil, gas discovery made
 - Often set up SWF before any revenues are received:
Brazil, Greenland, Papua New Guinea, Sierra Leone
- **Virtually All Try To Model After Norway's GPF**
 - Try to ensure new wealth preserved, invested wisely
 - Try to keep out of hands of entrenched elites, SOEs

Then The World Changed: Oil Prices Collapsed After 1H2014, Have Only Recovered Slightly During 2016

Europe Brent Spot Price FOB, Daily

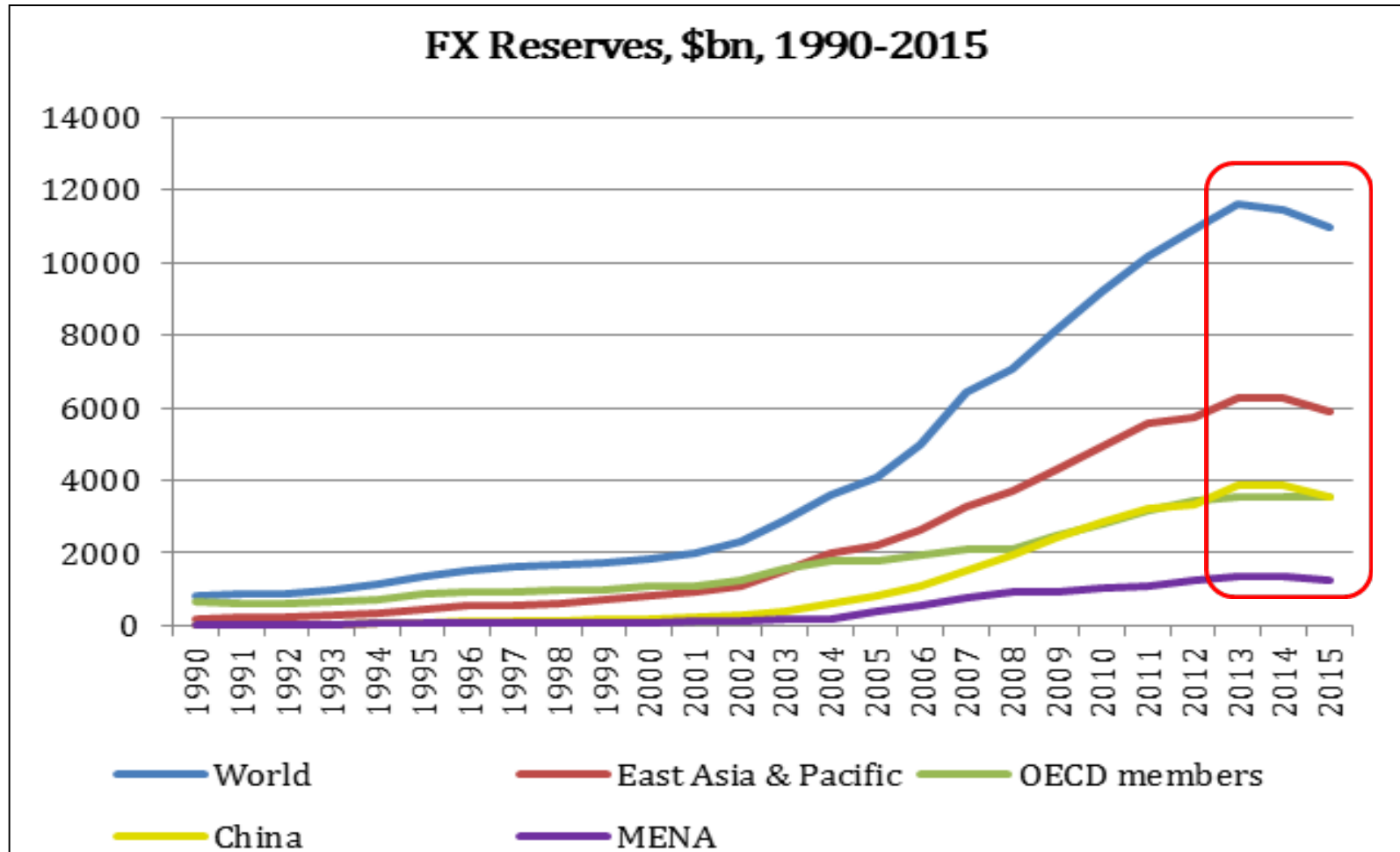
Dollars per Barrel



THOMSON REUTERS

Source: Energy Information Administration

Then The World Changed: Foreign Exchange Reserves Peaked In 2014 And Have Declined Since



- FX decline since 2014: **\$318bn** (-16 %), primarily Saudi Arabia, China, and Russia
- Capital flight from **EM** and **China** forced FX liquidation to stem currency devaluation
- Estimated budget deficit in GCC in 2016: **\$150bn**, 10 % of region GDP

Why Did The Rise Of SWFs As Investors And Financiers Cause Alarm?

- **They Became The Largest Single Group Of Net New Investors For Global Markets**
 - Reached \$5 Tr quickly, seemed heading for \$10 Tr
- **They Accounted For Bulk Of State-Backed Stock Investment Not Channeled Through SOEs**
 - More stock purchases than sales 2000-2012
- **Most Large Funds Owned By Non-Democratic States**
 - Norway the only western democracy

**The
Economist**

JANUARY 19/25 - 25/31 2008

www.economist.com

Romney's win in Michigan

Cloned food

Satellite wars

The global inflation scare

Democracy in retreat

Invasion of the sovereign-wealth funds



**How Sovereign
Wealth Funds
Were Originally
Viewed
(early 2008)**

**Sung to the tune
of Wagner's "Ride
Of The Valkyries"**

The Economist
January 19-25, 2008

Reasons for Concern About SWFs, Responses By Governments & Funds

- **Large and Growing Fast**
- **Biggest Funds Based In Non-Democratic Nations**
- **Most Cited Concerns:**
 - Could be used for political purposes
 - Might induce volatility in financial markets
 - Could have a detrimental impact on governance
- **Regulators, SWFs Responded To Concerns**
 - Santiago Principles signed October 2008
- **Market Meltdown Hit SWFs Very Hard**
 - Not as long-term, stable investors as previously thought

Sovereign-wealth funds

Assets, December 2015*, \$trn



Source: Sovereign Wealth Fund Institute

*Some figures are estimates or latest available

SWF Holdings By Country, 2015

**About \$5.4 Trn Assets
Controlled by
Autocratic States**

Source: Economist (2016)

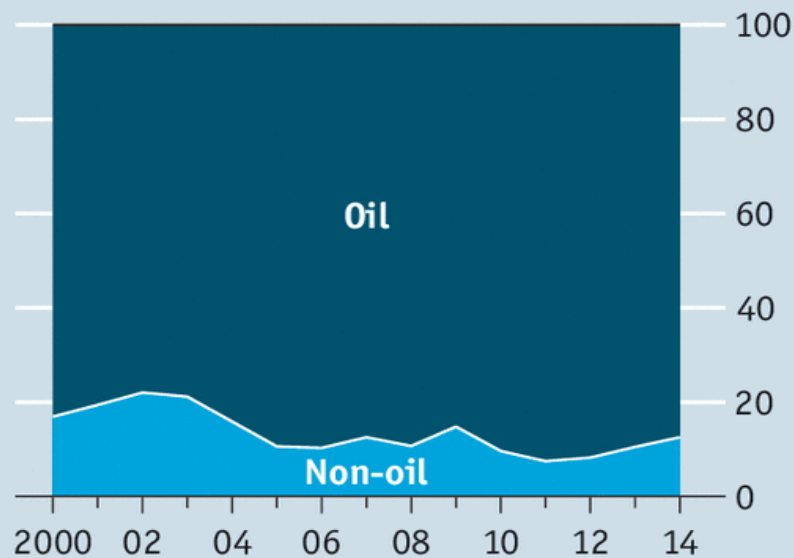
The Largest SWFs Are Mostly Non-Transparent, From Relatively Corrupt And Economically Unfree Nations

Country	Corruption Percept Index Value (Rank)	Economic Freedom Index (Rank)	Sovereign Wealth Fund Name	Fund Assets, US\$ Bn	SWF Scoreboard
Norway	85 (7)	68.8 (40)	Govnmt Pension Fund–Global	\$654.8	97
New Zealand	90 (1)	82.1 (4)	New Zealand Superannuation	15.2	94
United States	73 (19)	76.3 (10)	Alaska Permanent Fund	42.3	92
Ireland	69 (25)	76.9 (9)	National Pension Reserve Fund	18.1	86
Australia	85 (7)	83.1 (3)	Australian Future Fund	83.0	83
Azerbaijan	27 (139)	58.9 (169)	State Oil Fund of Azerbaijan	33.2	76
Singapore	87 (5)	87.5 (2)	Temasek Holdings	161.6	73
Kazakhstan	28 (133)	63.6 (65)	National Fund	61.8	65
Singapore	87 (5)	87.5 (2)	Government Investment Corp	220.0	65
Kuwait	44 (66)	62.5 (71)	Kuwait Investment Authority	296.0	63
Korea	56 (45)	69.9 (31)	Korea Investment Corporation	43.0	57
UAE-Abu Dhabi	68 (27)	69.3 (35)	Mubadala Development Comp	53.1	59
UAE-Abu Dhabi	68 (27)	69.3 (35)	Abu Dhabi Investment Authority	450.0	58
China	39 (80)	51.2 (138)	China Investment Corporation	482.2	57
Russia	28 (133)	50.5 (144)	Natl Wealth & Reserve Funds	148.5	50
UAE-Dubai	68 (27)	69.3 (35)	Intl Petroleum Investment Comp	65.4	26
Qatar	68 (27)	71.3 (25)	Qatar Investment Authority	135.0	15

Sources: Transparency International 2012 Corruption Perception Index (<http://cpi.transparency.org/cpi2012>); Heritage Foundation 2012 Economic Freedom Index (<http://www.heritage.org/index/ranking?src=home>); SWF Scoreboard values from Truman (2010)

A hard habit to break

Saudi Arabia, government revenues, %



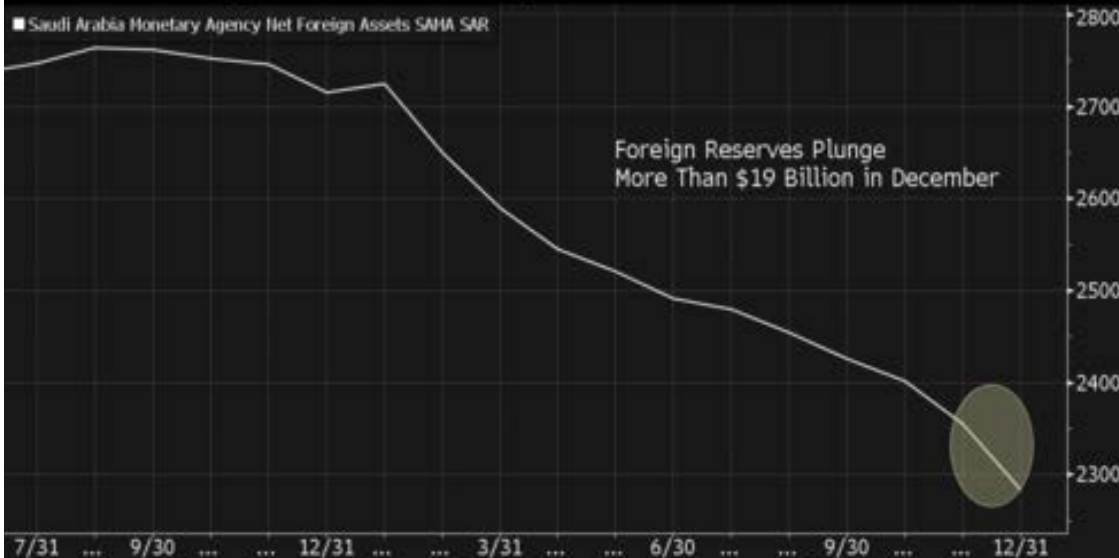
Source: Ministry of Finance

Source: Economist (2016)

Saudi Arabia Hopes To Create A \$2 Trillion SWF With Saudi Aramco Stock. Can They Do This?

Not A Chance! Aramco's Export Earnings Already Fully Committed To Funding KSA Government

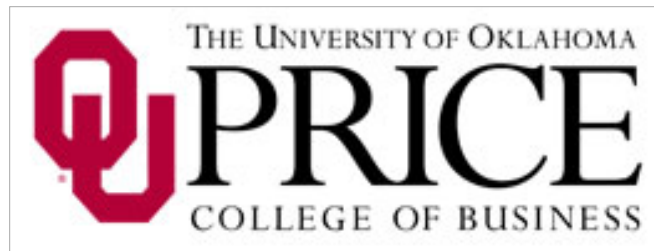
Saudi Foreign Reserves Drop With Oil



Source: Bloomberg (2016)

How Do SWFs Select Investments?

Theoretical, Empirical Evidence In
SWF Investment Strategies



Research Studies Examining How SWFs *Should* Select Asset Classes in Which to Invest

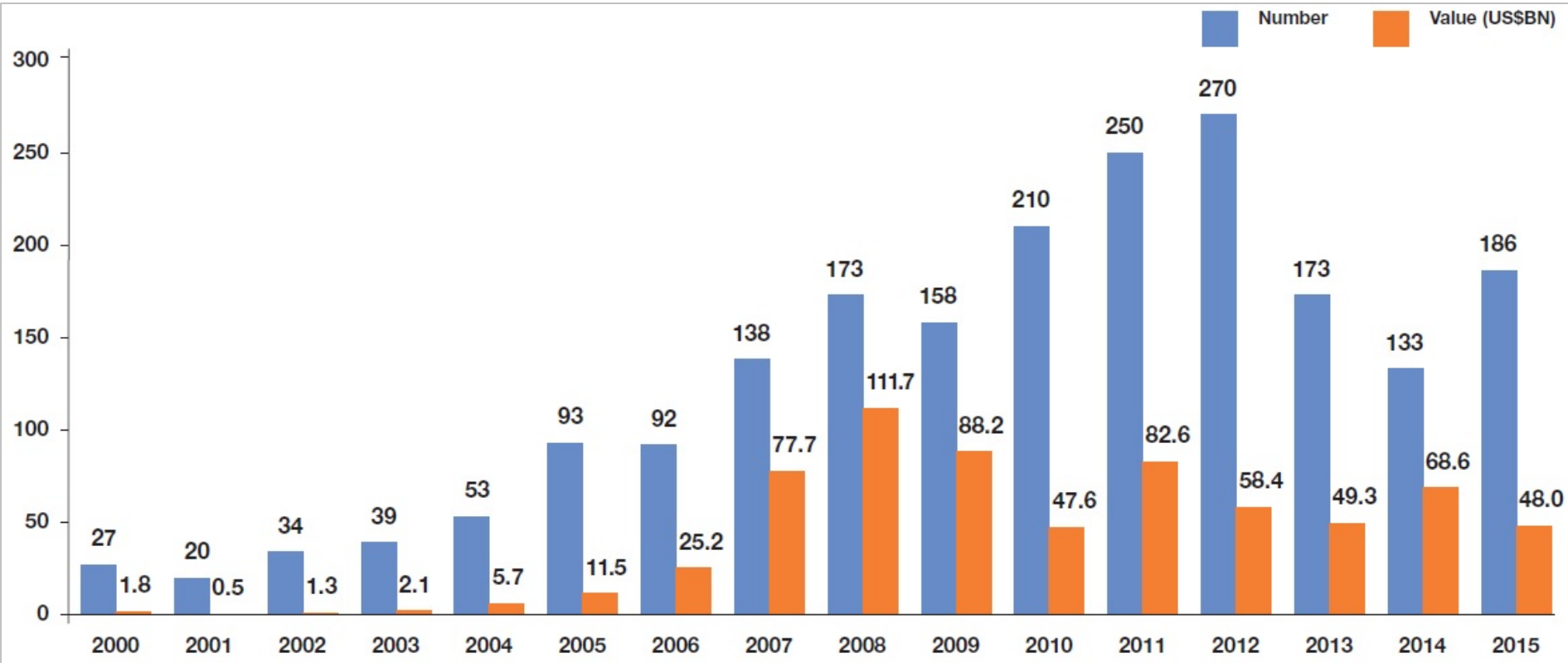
Study	Sample Description, Study Period, and Methodology	Summary of Empirical Findings and Conclusions
Gelb, Tordo, and Halland (OECD 2014)	Assess whether SWFs should be used to fund the infrastructure financing gap in developing countries. Propose a system of checks and balances to ensure SWFs do not undermine macroeconomic management or make politicized investments.	Conclude that a well-governed SWF can improve the quality of a nation's public investment program, but the critical issue will always be limiting the SWF's investments to those proper for a wealth fund and not to supplant infrastructure investment that should come from other state agencies.
Bodie and Brière (<i>Jrnl Investment Mgt 2014</i>)	Set out a new approach to sovereign wealth and risk management, based on contingent claims analysis (CCA). Note state must solve an asset-liability management (ALM) problem between income and expenditures.	Propose analytical framework for optimal ALM based on analysis of sovereign balance sheet and extending CCA theory to sovereign wealth. Suggest specifically accounting for nation's financial, human, resource wealth--and risks.
Chambers, Dimson, Ilmanen (<i>Jrnl Portfolio Mgt 2012</i>)	Discuss management, investment policies, and transparency of Norway's GPF; assess whether fund has successfully achieved objectives.	Conclude that the GPF is one of the world's best-managed large pension and that "the Norway Model" of investing both successful and the antithesis of the "Yale Model" of investing.
Raymond (<i>Economie Internationale 2010</i>)	Analyzes whether SWFs are and/or should be domestic investors of last resort (ILR) during financial crises. Shows that such SWF interventions occurred frequently after the 2008-09 Global Financial Crisis.	Gulf SWFs' interventions exerted stabilizing s-t effect on local stock markets, though long-term impact much less obvious. Note that SWFs, contrary to central banks, can easily provide long to medium term financing to banking systems.

Research Studies Examining How SWFs *Should* Select Asset Classes in Which to Invest (Cont.)

Study	Sample Description, Study Period, and Methodology	Summary of Empirical Findings and Conclusions
Martellini and Milhau (<i>EDHEC-Risk 2010</i>)	Propose dynamic asset allocation framework for SWFs, modeled as large long-term investors that manage fluctuating revenues emanating from budget or trade surpluses with stochastic investment opportunities. Suggest optimal asset allocation.	Optimal asset allocation of SWFs: should make state-dependent allocations to (1) performance-seeking p/f, often heavy with equities; (2) an endowment-hedging p/f; and a liability-hedging p/f heavy with bonds to mitigate interest rate and inflation risks.
Scherer (<i>Financial Market Portfolio Management 2009</i>)	Extend existing portfolio choice theories to SWFs in a strategic asset allocation model. Changing the existing analyses from single to multi-period framework allows for three-fund separation.	Optimal SWF portfolio should be split into speculative demand as well as demand against oil price shocks and short-term risk-free rate. Oil-rich countries should hold bonds.
Ang, Goetzmann, and Schaefer (<i>NBIM 2009</i>)	Evaluate role of active management in achieving superior long-term performance by Norway's GPF from 1998-2009. Also present review of efficient market hypothesis and apply lessons to evaluating GPF's performance.	Active management has played very small role. Performance is explained by exposure to systematic factors, and authors believe exposure to such factors is appropriate for a long term investor that can harvest illiquidity and other factor risk premiums over time.

Less Than 20% Of SWF Investment In Equity (Ex GPF)

SWF direct equity investments since 2000



- **186 deals** worth **\$48 bn** in 2015
- **40%** increase in the number of transactions and **23%** decrease by value relative to 2014, lowest level since 2010
- Average ticket size drop to **\$355ml** suggesting a more conservative strategy

Source: Bernardo Bortolotti, Sovereign Investment Lab

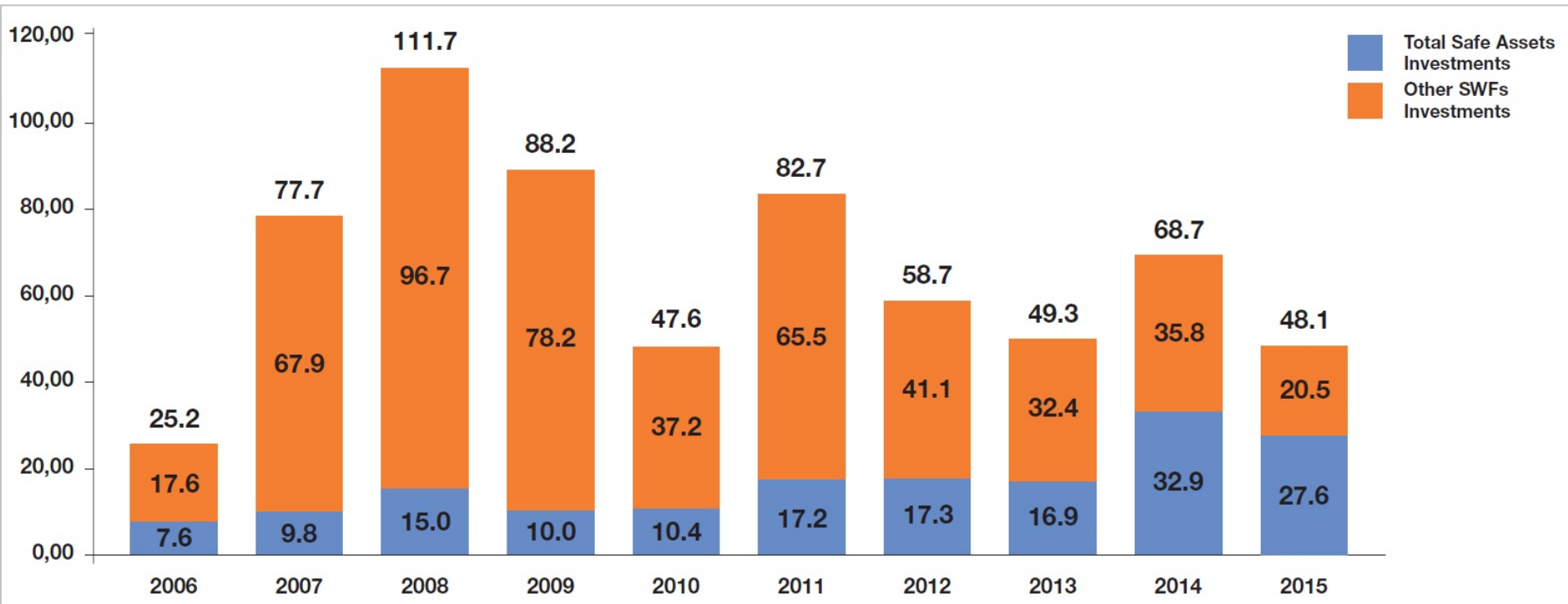
Investment Statistics For SWFs In The SIL Laboratory Database (Through YE 2014)

Country	Fund Name	# of Deals	Value of deals, \$Mn	Fraction foreign deals		Avg stake bought	Largest deal, \$Million	Avg size, \$Mn
				by # deals	by value			
Qatar	QIA	153	\$123,480	85%	79%	40.8%	\$13,260	\$807.1
China	CIC	116	111,321	59%	50%	15.3%	20,000	959.7
Singapore	GIC Pte Ltd	326	94,108	98%	99%	30.9%	10,339	288.7
Singapore	Temasek	276	75,589	86%	91%	18.8%	5,672	273.9
UAE-Abu Dhabi	IPIC	44	38,080	82%	71%	32.6%	8,000	865.5
UAE-Abu Dhabi	Mubadala	56	36,743	71%	69%	34.0%	4,000	656.1
UAE-Abu Dhabi	ADIA	77	26,027	97%	99%	33.7%	7,500	338.0
Kuwait	KIA	55	24,563	89%	82%	37.5%	3,000	446.6
UAE-Abu Dhabi	ADIC	22	14,044	73%	32%	48.3%	8,000	638.3
Ireland	NPRF	4	13,239	25%	0.1%	97.4%	7,264	3,309.8
Malaysia	Khazanah	56	12,375	64%	82%	44.4%	2,787	221.0
Norway	GPF	20	10,652	100%	100%	58.2%	1,500	532.6
China	NSSF	10	9,506	20%	3%	6.0%	2,200	950.6
UAE-Dhabi	ICD	5	6,572	100%	100%	31.6%	3,397	1,314.5
Total All Funds		1,634	\$601,542	82%	69.1%	7.9%	\$20,000 (dom)	\$368.4
Total Exc GPGF		1,225	\$593,622	76%	68.7%	16.3%	\$20,000 (dom)	\$485.0

SWFs Increasingly Prefer Safe Equity Investments

SWF Investments In Safe Assets*, 2006-2015 (\$ Billion)

* Safe Assets includes Infrastructure & Utilities, Real Estate and Restaurants, Hotels, Motels sectors.

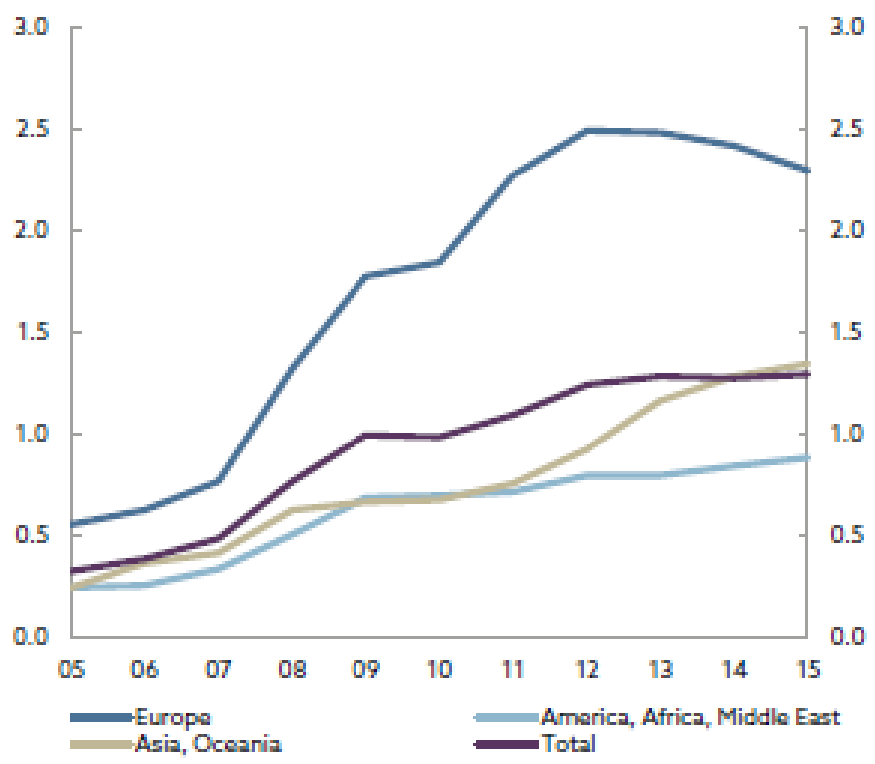


- Safe assets investments continue to grow: in 2015 they account a stellar **57%** of total SWF investment
- Low risk asset-substitution (government bonds), inflation hedging in QE, illiquidity premia are driving enhanced exposure

Source: Bernardo Bortolotti, Sovereign Investment Lab

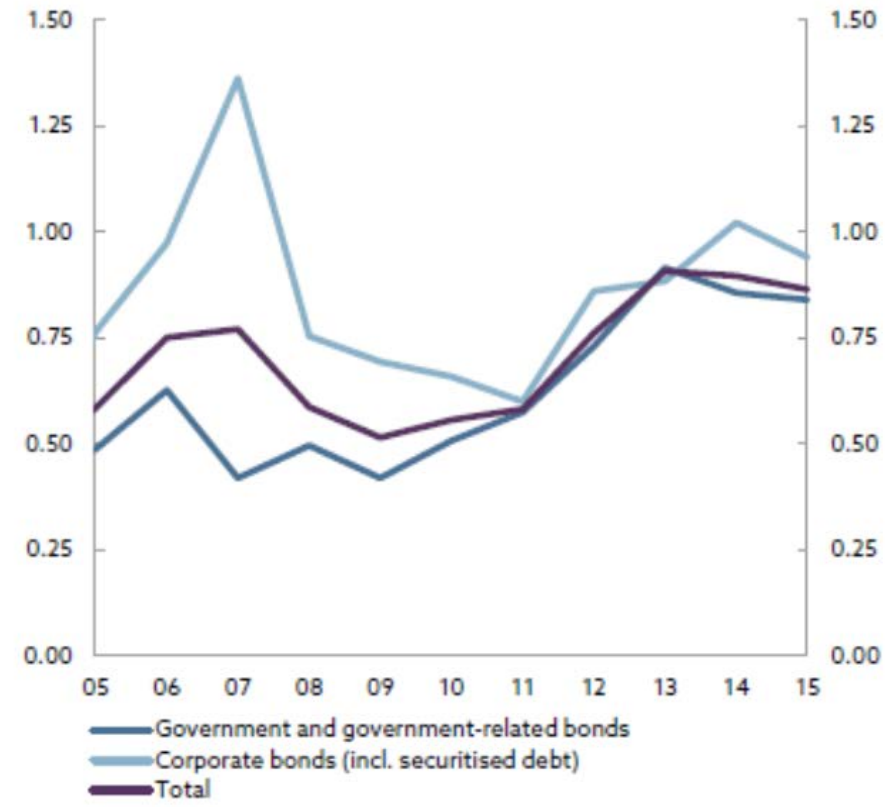
The (Very) Special Case Of Norway: The GPF's Holdings In Global Equity & Debt Markets

Chart 9 The fund's holdings in equity markets. Percent of market value of equities included in the reference index for equities



Source: FTSE, Norges Bank Investment Management

Chart 16 The fund's holdings in fixed-income markets. Percent of the market value of bonds in the reference index for bonds



Source: Barclays, Norges Bank Investment Management

Factor Loadings Of Norway's GPFG: Equity And Fixed-Income Investments

Chart 21 Factor exposures of the fund's equity investments. Coefficients

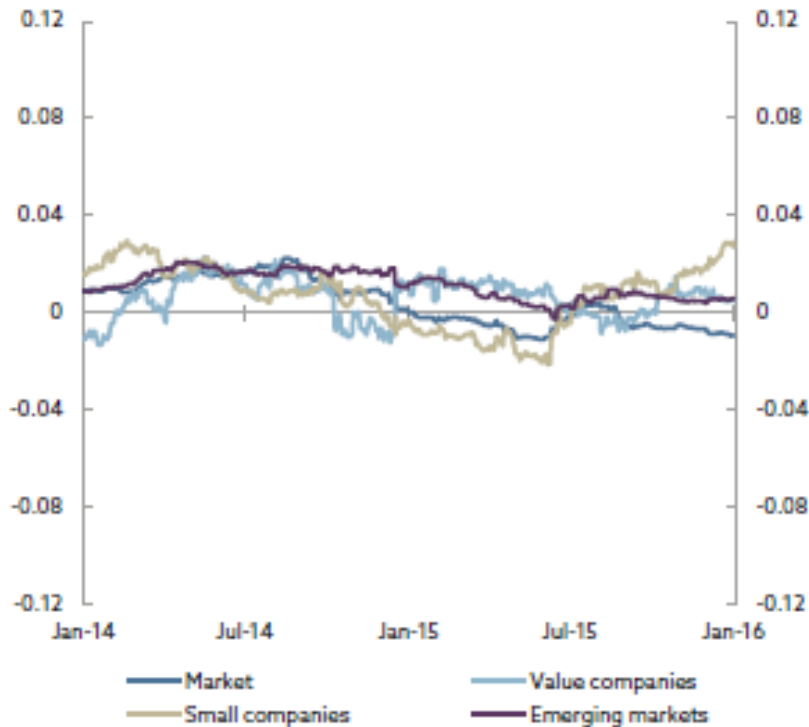
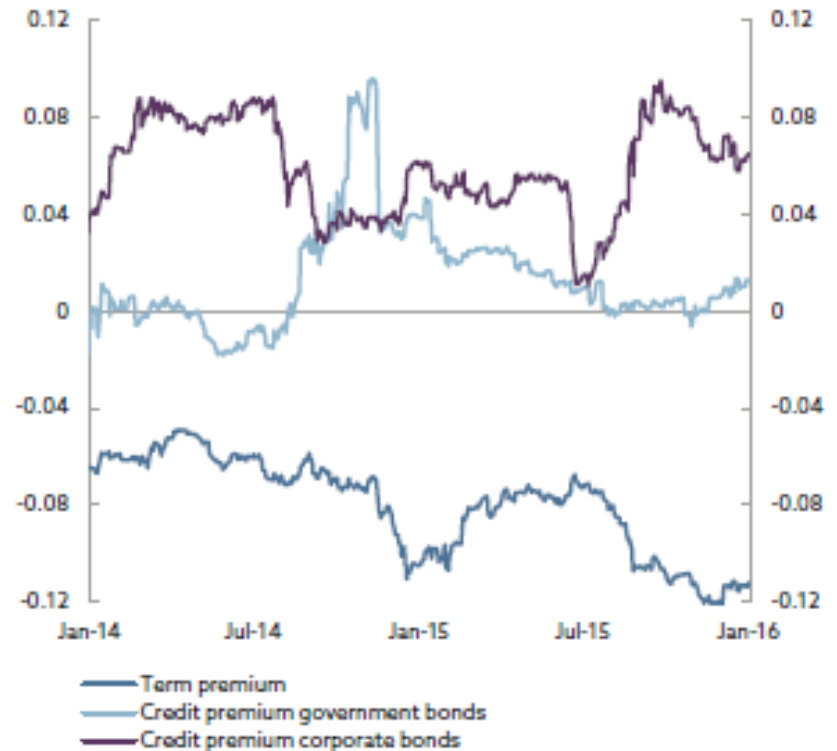


Chart 22 Factor exposures of the fund's fixed-income investments. Coefficients



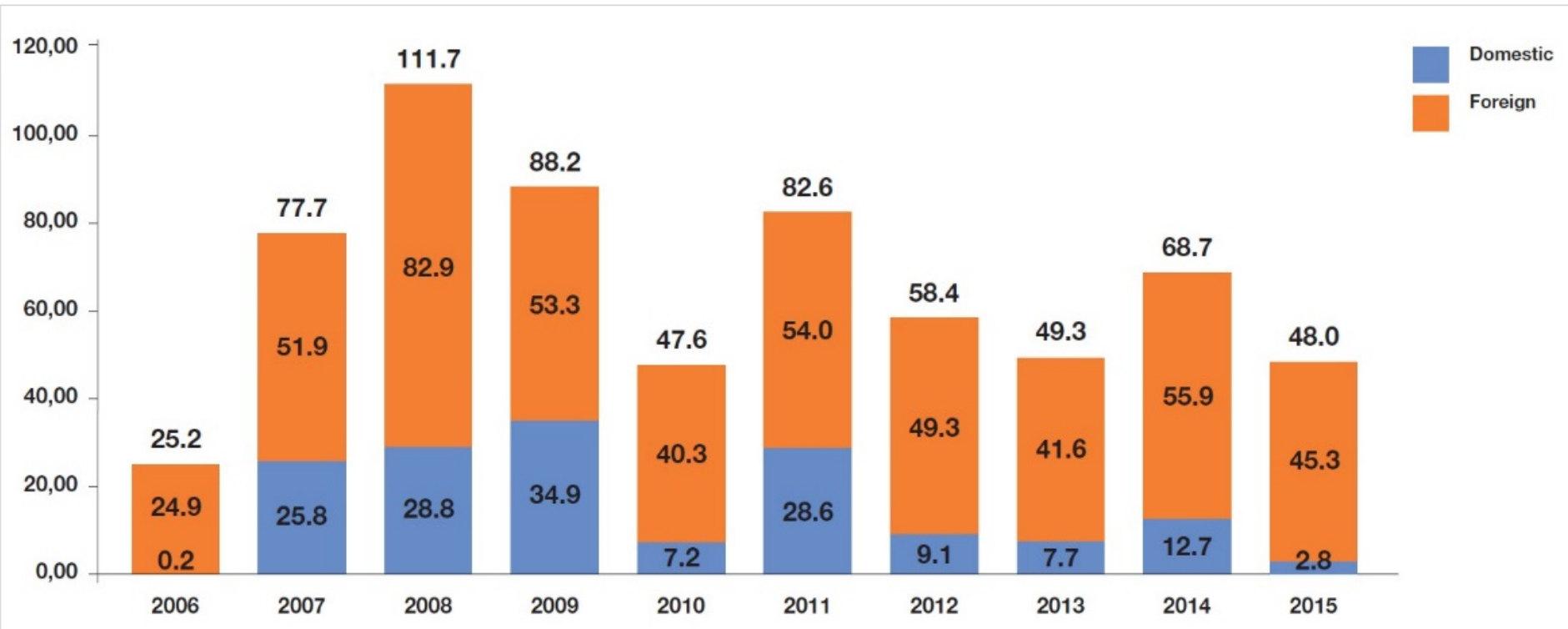
Source: Norway GPFG Annual Report 2015

Empirical Studies Examining SWF Geographic And Industrial Investment Patterns

Study	Sample Description, Study Period, and Methodology	Summary of Empirical Findings and Conclusions
Murtinu and Scalera (<i>JIM</i> 2016)	Sample of 716 investments made by 22 SWFs from 13 countries over 1997-2013, study whether the use of investment vehicle is influenced by SWF opacity and presence of political ties between SWF's and target country.	Find that SWF opacity positively impacts the use of vehicles, regardless the type of vehicle used. Bilateral political ties negatively impact only the use of corporate vehicles and increase the likelihood that SWFs invest through vehicles not located in the target country.
Ciarlone and Miceli (<i>WP</i> 2014)	Use a specifically built proprietary dataset encompassing 1,903 equity acquisitions made by 29 SWFs over the period 1995-2010 to study the determinants of SWF investment choices at macro level, with special emphasis on the possible reaction to a financial crisis in a potential target economy.	Find SWFs prefer to invest in countries with higher degree of economic development, larger and more liquid financial markets, better protection to investors, and more stable macroeconomic environments. SWFs seem to engage in a "contrarian" behavior by increasing acquisitions in countries hit by crises. Play a stabilizing role on local markets during periods of financial turmoil.
Knill, Lee, and Mauck (<i>Jrnl Corp Finance</i> 2012)	Use 900+ target firm stock purchases 1984-2009 to test if bilateral political relations influence SWF investment decisions. Do political factors impact if SWFs invest and how much.	Political relations impact where SWFs invest, but less so how much. SWFs more likely to invest in countries with which they have weaker political relations, suggesting non-financial motives in investment decisions.
Knill, Lee, and Mauck (<i>Jrnl Corp Finance</i> 2012)	Use 900+ target firm stock purchases 1984-2009 to test if bilateral political relations influence SWF investment decisions. Do political factors impact if SWFs invest and how much.	Political relations impact where SWFs invest, but less so how much. SWFs more likely to invest in countries with which they have weaker political relations, suggesting non-financial motives in investment decisions.
Chhaochharia and Laeven (WP 2010)	Use sample of 29,634 equity investments by 27 SWFs and 38,880 stock investments by public pension funds in 56 countries 1996-2008 to test if SWFs show systematic investment biases.	SWFs show strong biases vs other investors. Tend to chase past returns, hold conservative p/f that are poorly diversified geographically and industrially. SWFs prefer to invest in countries with strong legal institutions.

SWFs Invest Overwhelmingly Abroad

SWF investments at home/abroad, \$Billion, 2006-2015

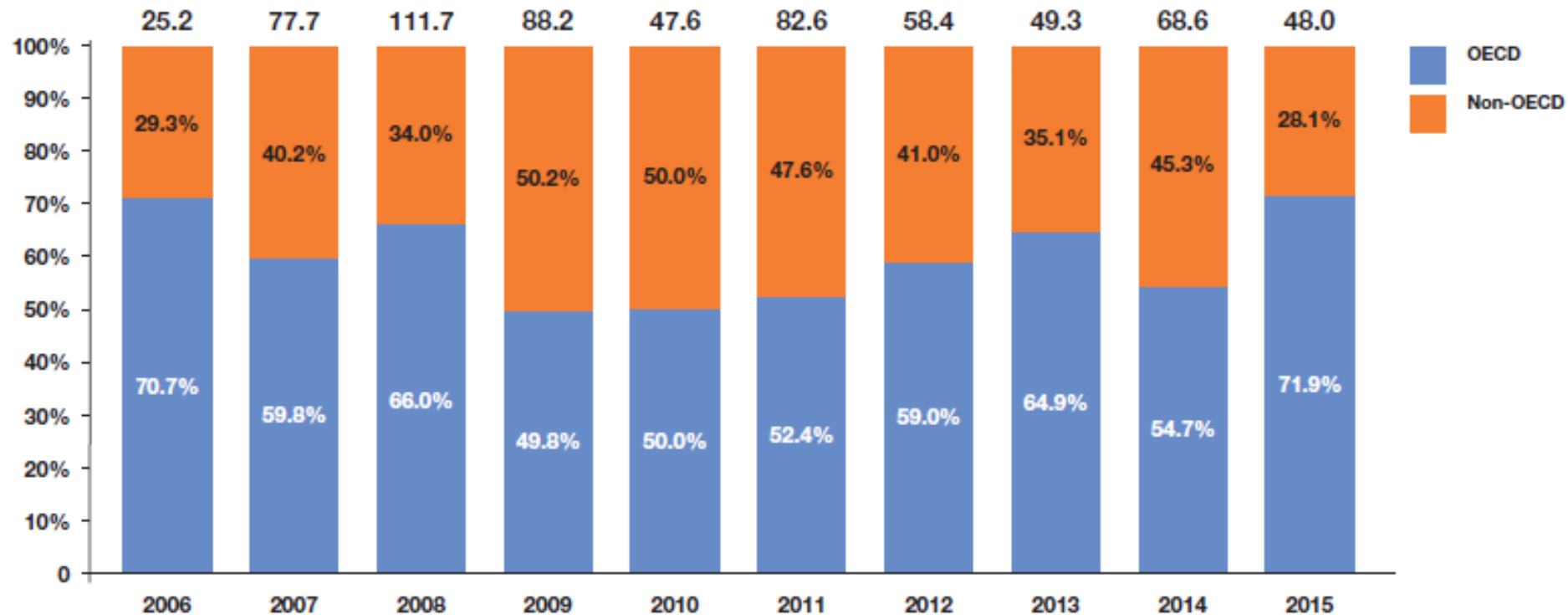


- SWF invested **94%** abroad, aiming at intergenerational wealth preservation by global diversification of investments

Source: Bernardo Bortolotti, Sovereign Investment Lab

SWF Investments Concentrated In OECD Countries

Figure 8: SWF Investments in OECD and Non-OECD Markets, 2006 - 2015 (US\$bn)

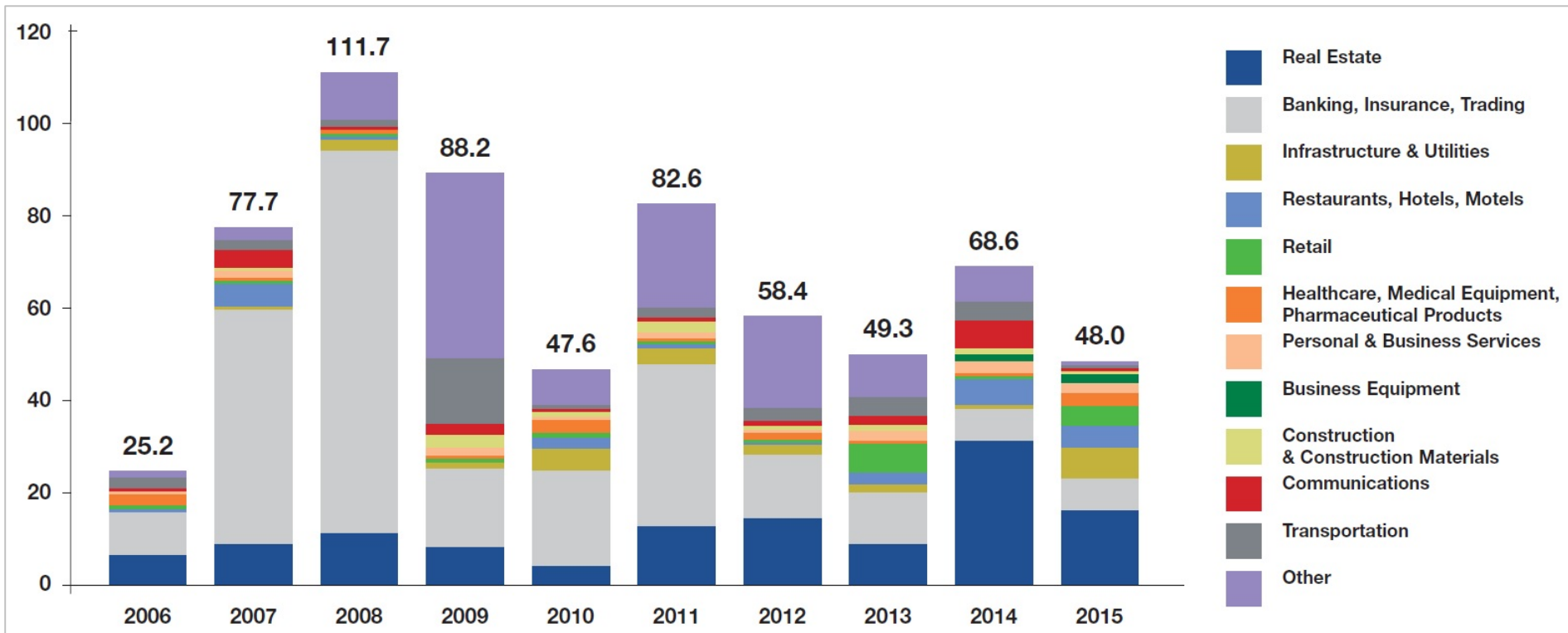


Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Bocconi University

Source: Sovereign Investment Lab

Sectoral Distribution Of SWF Investments

SWF Direct Equity Investments By Target Sector, 2006-2015 (\$ Billions)

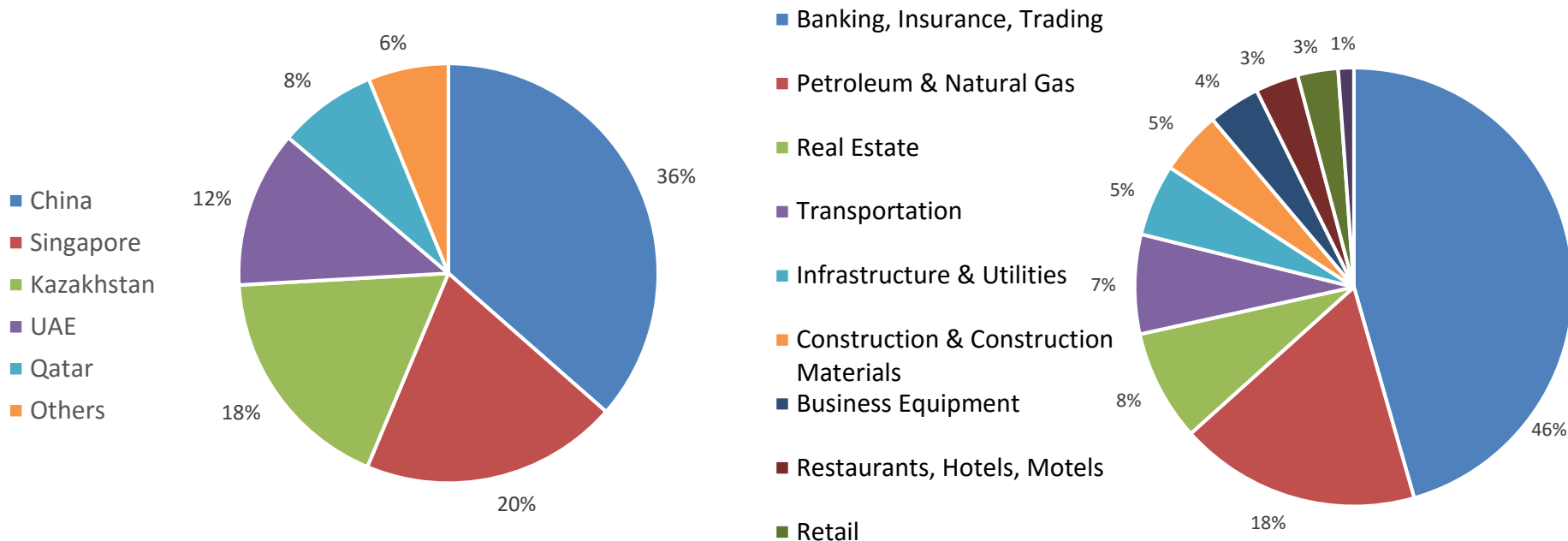


- With **31** deals worth **\$23.4bn**, in 2015 RE accounts for **23%** of deal value, with a penchant for commercial property in US and London.
- In relative terms, increased exposure to **financial sector in EM**, notably Turkey (QIA), China (a global SWF alliance for HK CITIC), and India

Source: Bernardo Bortolotti, Sovereign Investment Lab

SWFs Also Divest Assets, Especially Recently

SWF equity disinvestments by SWF home country and sector, 2015

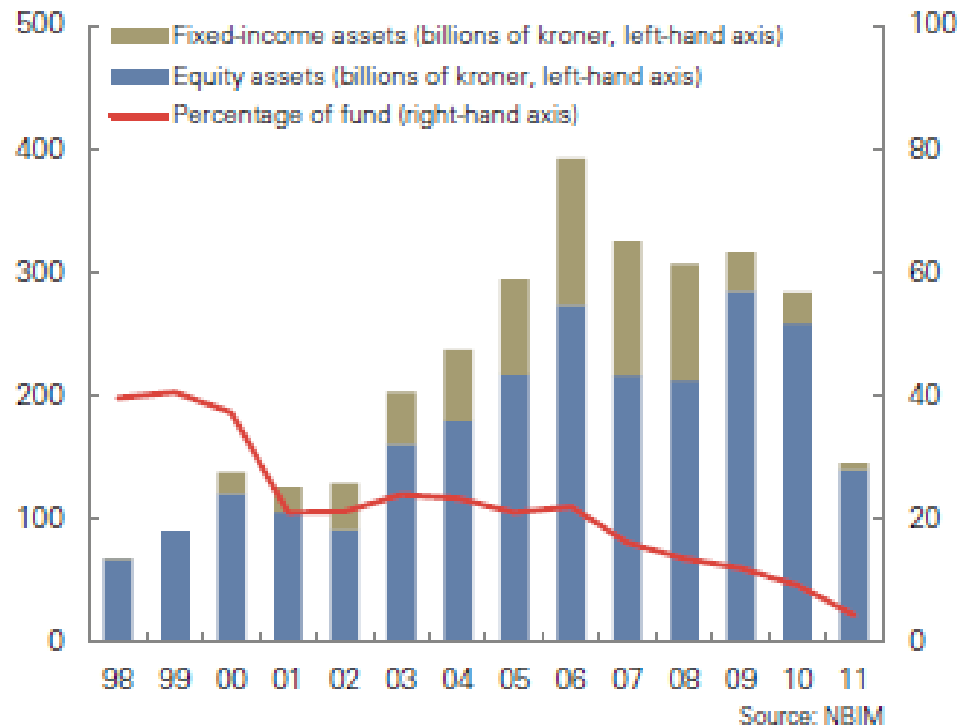


- **70** equity disinvestments for a total of **\$22.5 bn**, quite evenly split by fund type
- Sales did not eclipse new investments: net acquisitions worth **\$25.5 bn**
- China, Singapore, and Kazakhstan most active in redemptions, heavily skewed in the financial and energy sectors

Source: Bernardo Bortolotti, Sovereign Investment Lab

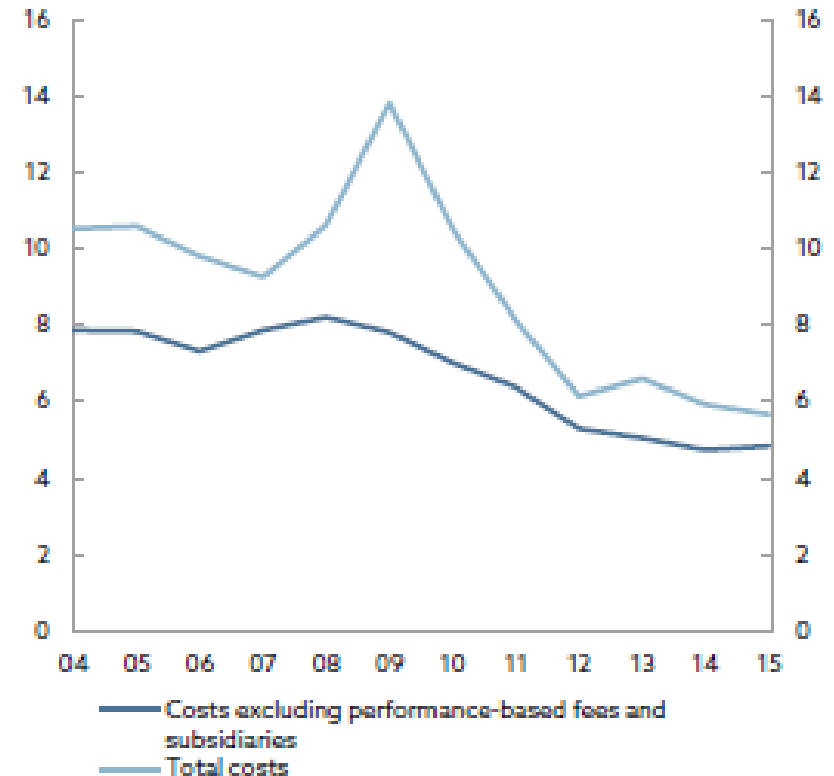
Norway's GPFG Is Mostly Managed Internally--And At Very Low Cost

Chart 7-1 Assets under external management at year-end. Billions of kroner and percentage of the fund



Source: Norway GPFG Annual Report 2011

Chart 26 Management costs as a share of assets under management. Basis points



Source: Norway GPFG Annual Report 2015

What Is The Impact Of SWF Investments On Target Firms?

Survey Existing Empirical Evidence
And Present Our Own



Empirical Studies Examining Impact of SWF Investments on Target Firm Performance

Study	Sample Description, Study Period, and Methodology	Summary of Empirical Findings and Conclusions
Bortolotti, Fotak, and Megginson (<i>RFS</i> 2015)	Construct a dataset of 1,018 investments by SWFs (or SWF-owned investment subsidiaries) in publicly traded firms completed over 1980-2012 period. Generate “benchmark” control sample of stock purchases by financial investors from same countries as sample of SWFs, targeted at firms headquartered in the same countries as SWF investment targets, and executed over the same time period	They find that announcements of SWF investments are associated with significant mean abnormal returns of 0.9% over (-1,+1), including investments by Norway’s GPF, and 2.45% without Norway. However, these are significantly lower than the 5.02% mean abnormal returns generated by the private benchmark investors, implying the existence of a sovereign wealth fund “discount” due to their government ownership.
Karolyi and Liao (<i>JCF</i> 2015)	Compare 4,026 cross-border acquisitions 1998-2008 by govt-controlled acquirers to 127,786 deals by private acquirers and 733 deals made by SWFs and other state-owned funds. Test if investments by govt acquirers and SWFs/other funds yield different target firm stock returns than do private acquisitions	Announcement return for private acquisitions (5.0%) signif higher than for state acquirers (2.8%), and return around SWF/other funds investments (0.8%) much smaller than either. Also find 3-yr mean and median buy-and-hold ER for SWFs/other funds (-50.3%; -62.8%) significantly lower than for private acquirers (-9.4%; -40.3%) and state-controlled acquirers (-7.6%; -30.6%).
Borisova, Fotak, Holland, and Megginson (WP 2014)	Using sample of 6,671 credit spreads from 1,723 bonds issued by 244 firms from 43 countries over 1991-2010, examine the impact that state ownership (including 1,060 firm-years with SWF investment) of a firm’s stock has on that company’s cost of debt, as measured by the yield spread above treasuries. Examine for full sample period and	In the full 1990-2010 sample, they find that state ownership (0/1) is associated with significantly higher (40 bp) cost of debt, and this is even larger during pre-crisis period, 1990-2007. From 2008 on, basic cost of debt rises sharply, and state ownership becomes associated with significantly lower (18bp) cost of corporate debt. SWFs specifically are associated with a higher cost of debt both before (46.7 bp) and after (26.1

Empirical Studies Examining Impact of SWF Investments on Target Firm Performance

Study	Sample Description, Study Period, and Methodology	Summary of Empirical Findings and Conclusions
Knill, Lee, and Mauck (<i>Jrnl Fincl Intermed</i> 2012)	Use sample of 231 SWF listed stock purchases 1984-2009 to examine whether this investment significantly impacts the return-to-risk performance of target firms.	Target firm raw returns decline after SWF investment. Risk also declines, but find net reduction in payment for risk over 5 yrs. Thus SWFs don't provide monitoring benefits offered by other institutional investors.
Bertoni and Lugo (<i>JCF</i> 2014)	Study impact of SWF investments on credit risk of targets by examining evolution of credit default swap spreads (CDS) after 371 SWF investments over 2003-10.	Target's credit risk decreases after SWF investment, especially for 1-year maturity CDS; suggests market sees SWFs as investors that may help manage short-term liquidity risk.
Dewenter, Han, and Malatesta (<i>Jrnl Fincl Econ</i> 2011)	Analyze short and long-term impact of SWF investments on targets using sample 227 stock purchases and 47 SWF stock sales over January 1987-April 2008. Try to determine whether there is a trade-off between SWF monitoring and lobbying benefits and tunneling and expropriation costs.	Find signif announcement ER for SWF stock purchases (+1.52%) and divestments (-1.37%). Find signif negative median 1-yr cumulative MAER (-4.5%), but significantly positive median 3-yr (+7.3%) and 5-yr (+31.2%) returns for targets after SWF investments. Find SWFs are active monitors, with over half of target firms experiencing one or more events indicating SWF monitoring or influence.
Kotter and Lel (<i>Jrnl Fincl Econ</i> 2011)	Use sample of 417 SWF listed stock purchases 1980-Feb 2009 to examine SWF's impact on short and long term valuation and performance of targets. Also study which types of target firms attract SWF investment.	SWFs prefer large, poorly performing companies, and news of investments yields positive initial returns (+2.25%) that are higher for more transparent funds. Mean L-T returns positive, median returns insignificantly negative. SWFs are generally passive shareholders.

Our Empirical Study Of SWF Investments: Bortolotti, Fotak, Megginson (RFS 2015)

- **Examine Wealth Impact of SWF Investment in Listed Firm Stock, 1980-2012 [SWF Sample]**
 - Examine what type of firms selected, short and long-term financial impact
- **Compare to Wealth Impact of Investments by Other Financial Investor from Same Countries [Benchmark]**
 - First study to make this control group comparison
- **Both SWF and Benchmark Sample Drawn from SDC and Press Reports—then Verified**

	SWF		Benchmark	
Year	Proportion	N	Proportion	N
1983	0.00%	0	0.02%	1
1985	0.10%	1	0.02%	1
1986	0.00%	0	0.13%	8
1987	0.20%	2	0.22%	13
1988	0.40%	4	0.22%	13
1989	0.10%	1	0.55%	33
1990	0.20%	2	0.50%	30
1991	0.60%	6	0.89%	53
1992	0.40%	4	0.85%	51
1993	0.30%	3	1.62%	97
1994	0.99%	10	1.89%	113
1995	0.20%	2	2.08%	124
1996	0.40%	4	2.28%	136
1997	0.50%	5	2.31%	138
1998	0.40%	4	1.59%	95
1999	0.40%	4	2.88%	172
2000	1.39%	14	2.68%	160
2001	1.39%	14	2.76%	165
2002	1.89%	19	3.75%	224
2003	2.28%	23	7.33%	438
2004	3.77%	38	5.94%	355
2005	3.87%	39	5.02%	300
2006	5.96%	60	6.28%	375
2007	12.61%	127	7.73%	462
2008	31.18%	314	8.27%	494
2009	17.58%	177	8.65%	517
2010	6.55%	66	8.92%	533
2011	5.16%	52	7.98%	477
2012	1.19%	12	6.64%	397

Time Series Distribution Of SWF And Benchmark Investments, 1983-2012

- SWF Investments heavily concentrated in years since 2005, especially 2007-09.
- Benchmark investments Spread much more evenly over 1995-2012, though also spike after 2002.

Industrial Distribution Of SWF And Benchmark Investments

Industry	SWF		Benchmark	
	Proportion	N	Proportion	N
Oil and Gas	7.11%	72	3.51%	210
Basic Materials	6.80%	69	13.88%	829
Industrials	18.17%	185	19.02%	1136
Consumer Goods	8.32%	85	12.01%	718
Health Care	5.28%	54	4.10%	245
Consumer Services	11.17%	114	11.51%	688
Telecommunications	3.65%	37	1.11%	66
Utilities	3.65%	37	1.58%	94
Financials	29.54%	301	25.52%	1525
Technology	6.29%	64	7.78%	465
Missing	3.24%	33	0.37%	22

- Both SWFs and benchmark investors target financial firm above all others. SWF investment even more concentrated in finance ex Norway's GPFG.

	SWF		Benchmark	
Country	Proportion	N	Proportion	N
Australia	1.88%	19	33.91%	2026
Canada	2.57%	26	0.77%	46
China	7.70%	78	13.32%	796
Hong Kong	2.37%	24	2.29%	137
France	1.78%	18	0.08%	5
Germany	1.09%	11	0.15%	9
India	4.54%	46	0.89%	53
Indonesia	1.88%	19	1.39%	83
Italy	1.68%	17	0.02%	1
South Korea	0.99%	10	13.21%	789
Malaysia	4.05%	41	10.18%	608
New Zealand	0.49%	5	0.74%	44
Norway	0.00%	0	5.51%	329
Qatar	1.68%	17	0.05%	3
Singapore	5.53%	56	9.24%	552
Thailand	1.09%	11	0.87%	52
UAE	1.48%	15	0.18%	11
UK	4.44%	45	1.27%	76
USA	44.32%	451	1.37%	82

Geographic Distribution Of SWF And Benchmark Investments

- SWFs invest primarily either in their home markets or in developed markets of EU and particularly US. However, GPFC highly concentrated in US
- Benchmarks far more likely to invest domestically (83%) than SWFs (12%) and sample is heavy Australia, China, Korea, Malaysia and Singapore.

Event Study Results: The SWF Discount

All Sovereign Wealth Fund Investments

Interval	N	Mean CAR	Median CAR	Patell Z		Generalized Sign Z	
(-1,+1)	796	0.89%	0.25%	<0.0001	***	0.0029	***
(-5,+5)	799	1.09%	0.76%	0.0001	***	0.0001	***
(-10,+10)	799	1.18%	0.72%	0.0011	***	0.0001	***

Sovereign Wealth Fund Investments Excluding Norway

(-1,+1)	400	2.45%	0.60%	<.0001	***	<.0001	***
(-5,+5)	403	2.44%	0.70%	<.0001	***	0.0018	***
(-10,+10)	403	3.27%	1.81%	<.0001	***	<.0001	***

Benchmark Sample Investments

(-1,+1)	4830	5.02%	1.29%	<.0001	***	<.0001	***
(-5,+5)	4843	7.96%	3.20%	<.0001	***	<.0001	***
(-10,+10)	4852	9.47%	4.69%	<.0001	***	<.0001	***


Announcement period returns (CARs) are positive for all investments, but far higher for benchmarks than for SWFs! There is an **SWF Discount**, regardless of measure.

Key Lessons Of Sovereign Wealth Fund Research

And What Are the Unresolved Research Issues?

Financial Research Center

FSA Institute, Japan



Lessons Of Sovereign Wealth Fund Theoretical And Empirical Research

- **Though Large, SWFS Not Especially Odd Or Frightening**
 - Total value of financial assets worldwide=\$294Trn; Dwarfed by banks, mutual funds, insurance cos.
 - SWFs are too small, too politically constrained to be financial/geopolitical threats
 - SWFs operationally, financially similar to other IIs, but many are also “BDC” (big, dumb capital)
- **SWFs Aren’t Homogenous—But Also Not Idiosyncratic**
 - Norway’s GPF stands alone among large funds
 - Differ based on funding source; democratic vs others
 - Some strive for transparency; others quite secretive

Lessons Of Sovereign Wealth Fund Theoretical, Empirical Research (Cont)

- **SWFs Clearly Are State-Owned Funds And Often Make Politicized Capital Allocations**
 - But no evidence of foreign political interference; so no reason to impose restrictions or regulations
 - Are willing, able, encouraged to pursue political objectives in domestic investments
- **True Outliers Have Emerged—GPFG And QIA**
 - GPFG has emerged as alternative to “Yale Model” of endowment fund management, investment policy
 - Qatar making very high profile RE, stock investments; played decisive role in XStrata acquisition

Lessons Of Sovereign Wealth Fund Theoretical, Empirical Research (Cont)

- **While SWFs Are Here To Stay, They Are “Second Best” Organizational Form As Fiduciaries**
 - State ownership inevitably constrains their ability to invest abroad, actively monitor target managements
 - Private funds out-perform SWFs across the board
 - Small staffs constrain a refined investment strategy
- **But, Is There Any Real Alternative To SWFs in Societies Where State Plays A Dominant Economic Role?**
 - Were set up because existing investment tools, SOEs were inadequate, corrupt, or already “captured”
 - GPFG is being viewed as model for 25+ new SWFs

Unresolved Issues And Questions To Be Addressed By SWF Researchers

- **We Know Very Little About How/Where/Into What Large SWFs Invest (Except For GPF)**
 - Only observe listed stock deals (SDC), disclosed RE and unlisted stock purchases; miss bonds entirely
- **Still Look At SWFs From Western Perspective**
 - Haven't asked whether SWFs are a good idea
 - Don't know whether SWFs help or hinder domestic financial, industrial development
 - Unclear if they on net have increased or decreased state's influence over, role in domestic economy

Unresolved Issues And Questions To Be Addressed By SWF Researchers

- **To What Should SWFs Be Compared? What Are their True Comparators/Benchmarks?**
 - Our paper the first to compare to benchmarks
 - Clearly contradict positive conclusion of others
- **Can/Should SWFs Truly Become Financing Vehicles For Economic Development?**
 - Despite talk, funds mostly invest at home and in developed economies (especially UK and US)
- **Most Important: Should A Country With Large, Perhaps Temporary Excess Cash Flows Set Up A SWF?**

Thank You

William L. Megginson

wmegginson@ou.edu

<http://www.ou.edu/content/price/finance/faculty/billmegginson.html>

