
Understanding the role of venture capital and private equity on Iran's future economic development

REDDAL

Workshop at IRAMOT 2016

Teheran, December 8, 2016

Abstract

Understanding the role of venture capital and private equity on Iran's future economic development

In this workshop we will review in detail how the venture capital and private equity markets have evolved in Finland, South Korea, Taiwan, Malaysia and Vietnam, and what learnings we can draw from the history of these markets to how Iran can develop in the future.

These markets represent today different stages of maturity and sophistication when it comes to how technology companies are able to grow into globally competitive major players in their industry. We will discuss the decisions made by the governments in these countries, and what implications they have had for the development of the business ecosystem and growth. We will also take a concurrent view on the issues each of these countries are facing, and how that reflects to the stage Iran is now, and the decisions that are needed in Iran.

The end goal of the workshop is to develop an outline of policy for future Iranian growth, especially in the technology startup and mid-cap sectors, with the aim to create internationally leading Iranian companies. Participants are requested to actively participate in the discussion. No prior knowledge of the venture capital and private equity sector is needed, although familiarity with basic terms and concepts, and current day issues in Iranian economy and government policy will be beneficial.

Agenda

Iran is entering a new phase, where private equity can help drive growth especially in the SME and technology startup sectors

Finland, South Korea, Malaysia and Vietnam have all gone – or are going – through a similar process and represent different stages of maturity

Finland has built its private equity ecosystem step by step, but some gaps still remain

Korean private equity is expanding rapidly, but is polarized and suffers from unclear and ever changing regulation

Malaysian private equity is still early on, but can play a key role in building up SME capabilities, and has a strong SWF element

Taiwanese private equity faces both challenges and opportunities, but seems to be in a political gridlock

In Vietnam foreign capital is starting the private equity sector, but the legislative framework is still missing

Iran can benefit from the experiences of these countries, but must also address fundamental issues in its economy

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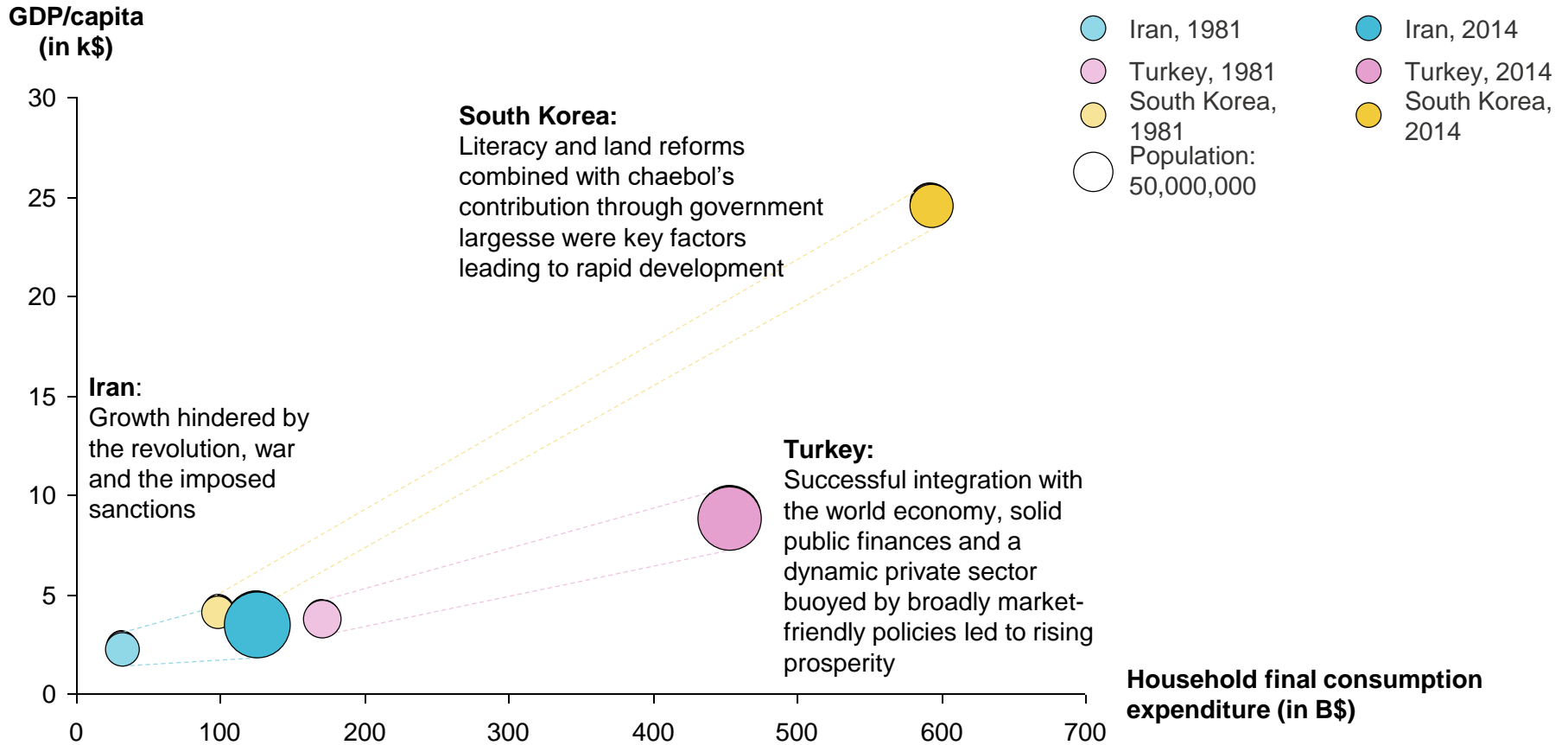
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South Korea and Turkey can perhaps illustrate the paths available for Iran

Iran and similar economies in 1981 and their position today

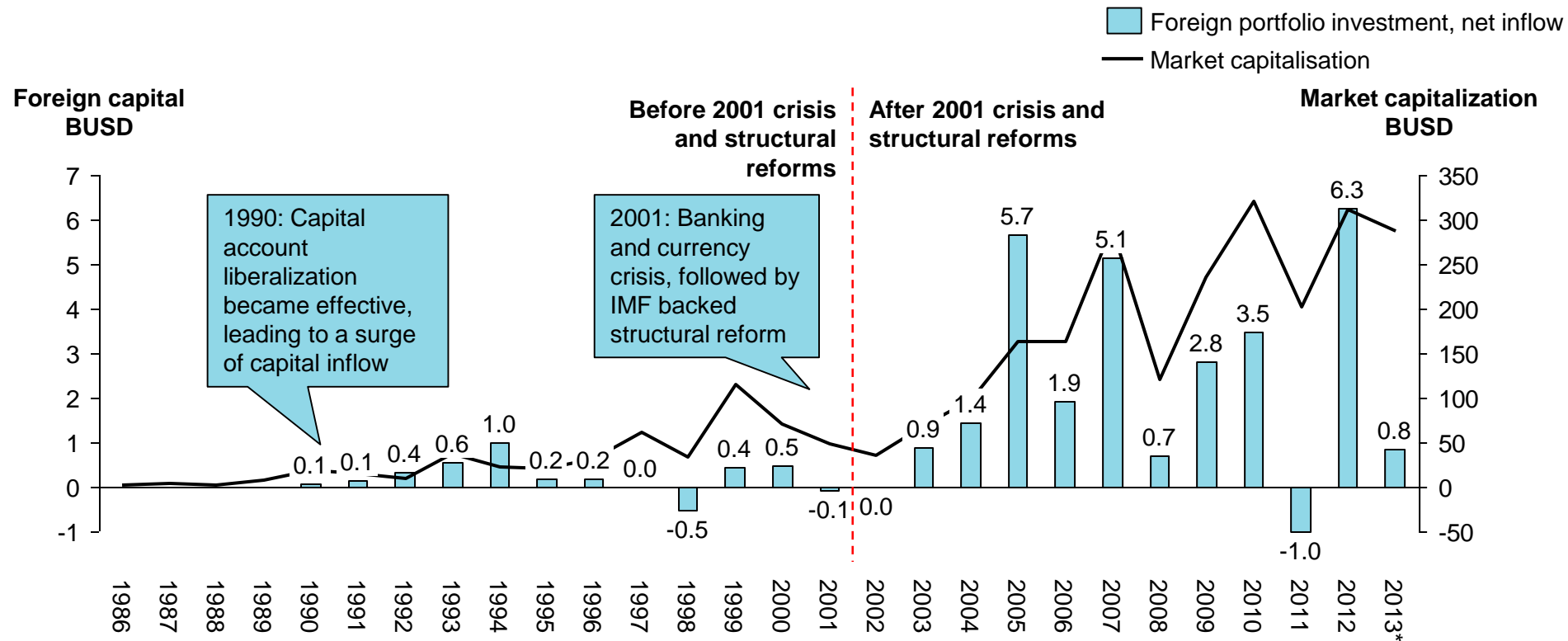


Source: The World Bank

Note: Indicators are calculated in constant 2005 \$US. 1986 data was used instead of 1981 for household final consumption expenditure in Turkey.

In Turkey, financial markets boomed in the short term after market opened to foreign investments – but volatility was high

Market capitalization, FPI and key events of Istanbul Stock Exchange

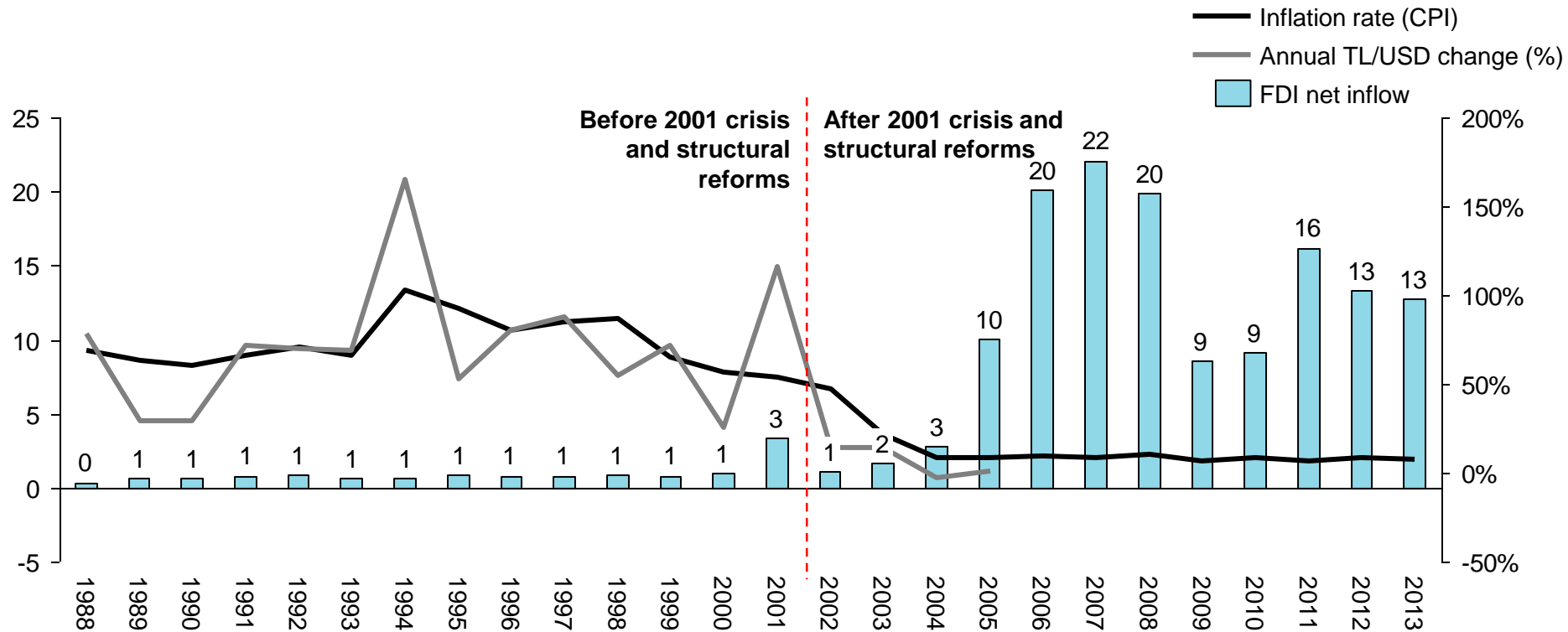


Note: Market capitalization in 2013 is measured as market capitalization at June 2013.

Source: World Bank; Istanbul Stock Exchange Review; Turkish Association of Capital Market

However, substantial foreign direct investments did not materialize until currency and interest risks decreased

Foreign direct investments, exchange rate and interest rates in Turkey 1990-2013



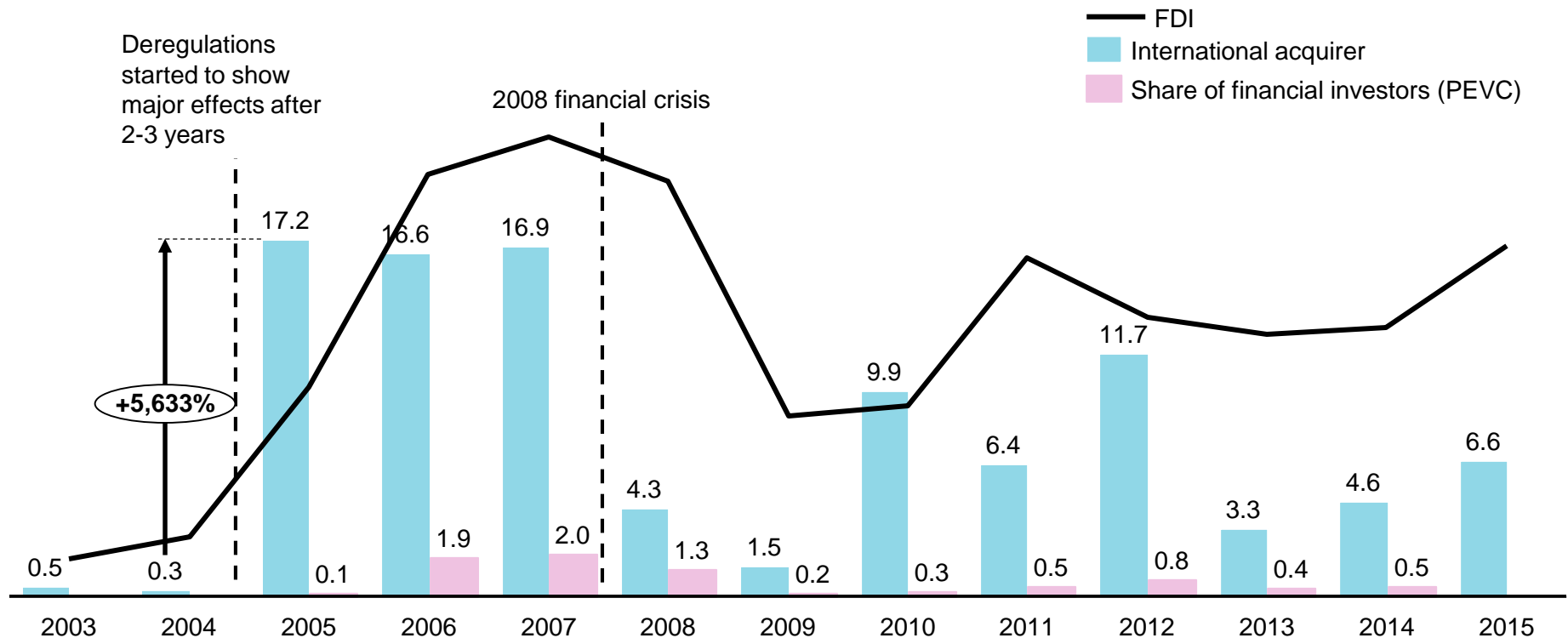
Note: FDI are the net inflows of investment to acquire a lasting management interest (10% of voting stock)

Note: *Market capitalization in 2013 is measured as market capitalization at June 2013

Source: Foreign direct investment net inflow from World Bank; inflation.eu;

Further, once FDI did come, nearly 80% was in the form of M&A and only 10% of the deals originated from PE-VC investors

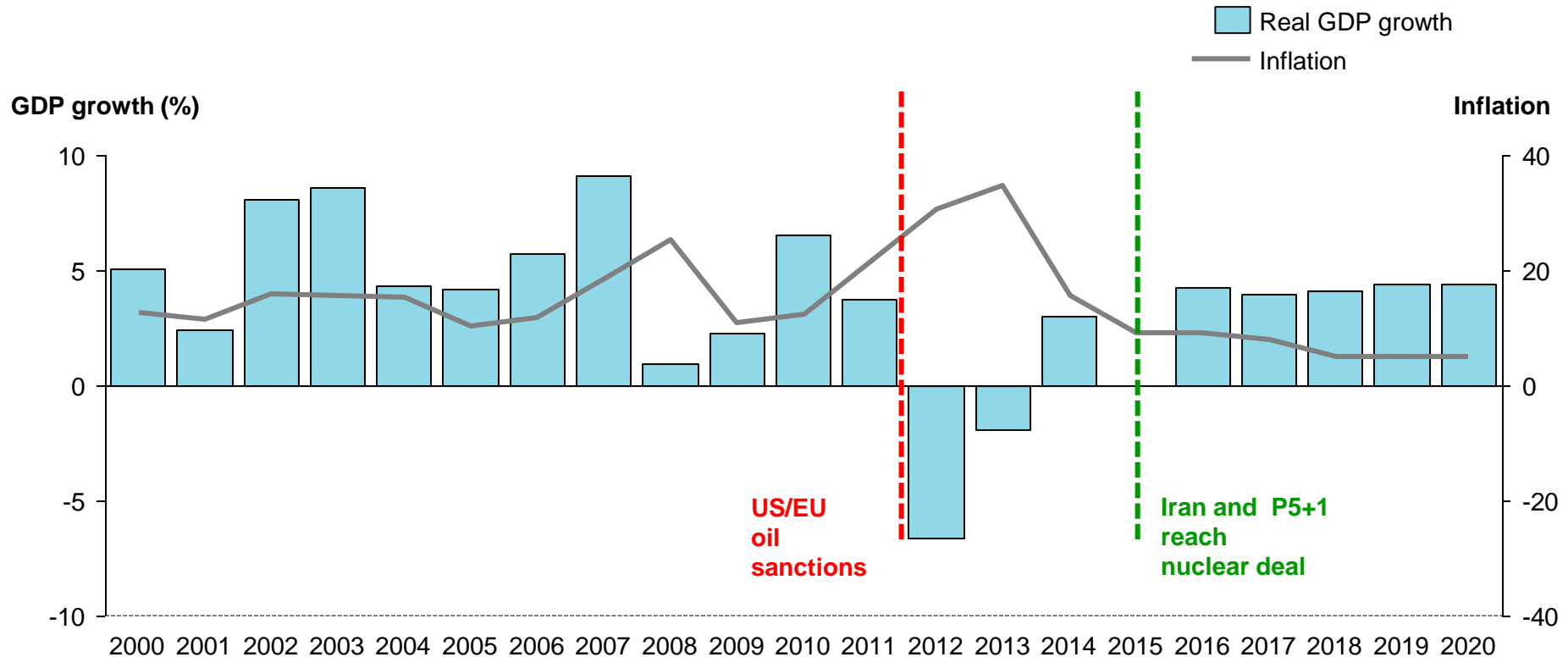
Turkey M&A market volume based on type of acquirer (BUSD)



Source: EY M&A Report Turkey (2011-2015), World Bank

The door opens – as inflation stabilizes and GDP growth projected to reach 5% international investors look to enter Iran

GDP growth % and inflation rate (2000-2020f)

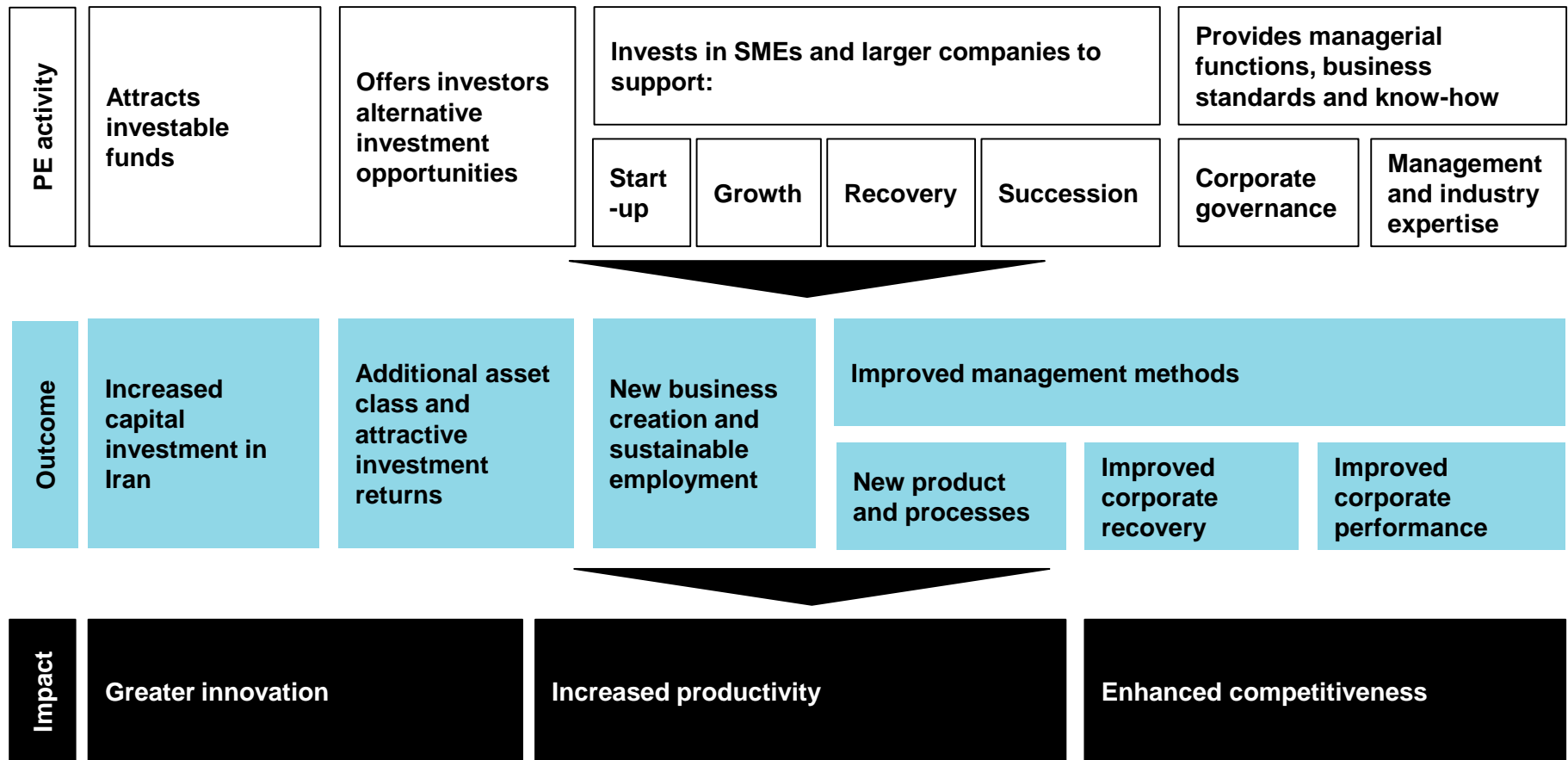


Note: 2015 GDP growth estimated at 0%. 2014 estimate based on Central Bank of Iran. Forecast takes into account current oil prices.

Source: IMF database December 2015 forecast, OPEC 2015 annual report, CBI

Private equity can accelerate growth in Iran via activities to foster innovation, increase productivity and competitiveness of businesses

Role of private equity to foster economic growth



Source: Frontier Economics (2013)

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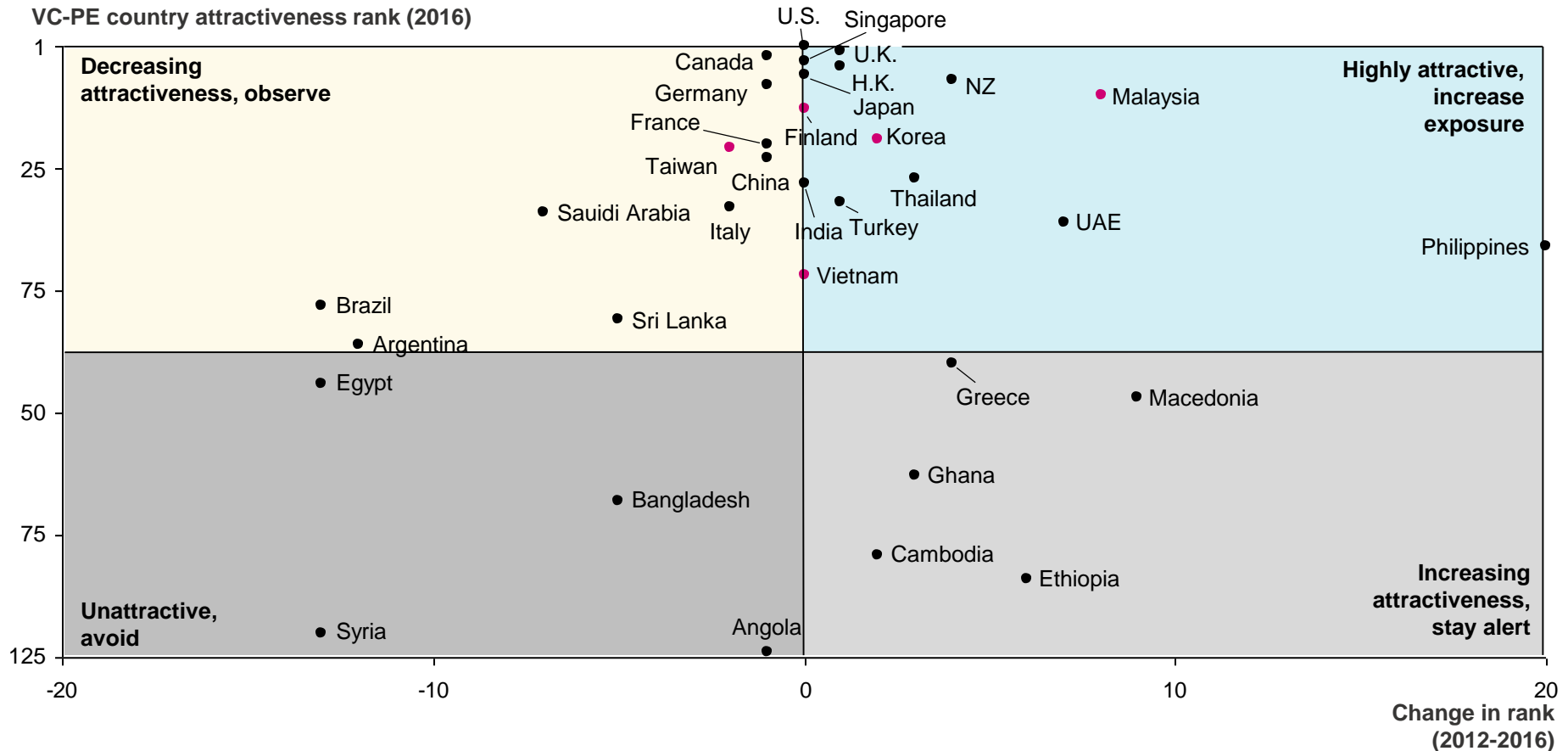
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According to a research, Finland, Korea, Malaysia and Vietnam are attractive VC-PE markets in 2016, Taiwan's attractiveness decreasing

Comparison of attractiveness of VC-PE sector by country

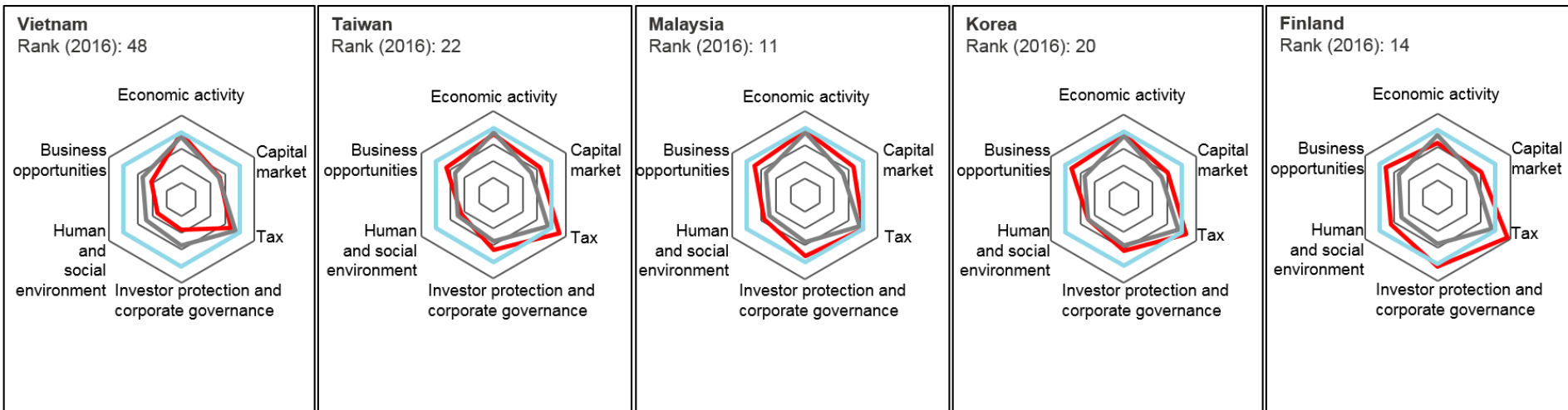


Source: IESE Business School, University of Navarra, *Venture Capital and Private Equity Country Attractiveness Index* (2016)

Finland, Korea, Malaysia and Taiwan exhibit different strength and weakness areas

IESE VC-PE country attractiveness index

— Asian average
— Country specific
— U.S.



Conclusion: developing equilibrium among the key drivers of VC and PE attractiveness is crucial

- These emerging markets present relatively attractive economic soundness and capital market infrastructure that is getting on par with developed markets
- However, “investor protection and corporate governance”, “human and social environment” and “business (entrepreneurial culture and deal) opportunities” are still poorly developed in all of these

Note: chart using scores for each driver; Asia average is weighted average of individual country data (Armenia, Azerbaijan, Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Japan, Kazakhstan, South Korea, Kyrgyzstan, Malaysia, Mongolia, Pakistan, Philippines, Russia, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam) by GDP or population

Source: IESE Business School, University of Navarra, *Venture Capital and Private Equity Country Attractiveness Index* (2016)

Both macro-economic and societal factors as well as sector specific indicators contribute to measuring VC-PE attractiveness

Six key drivers for VC-PE attractiveness index

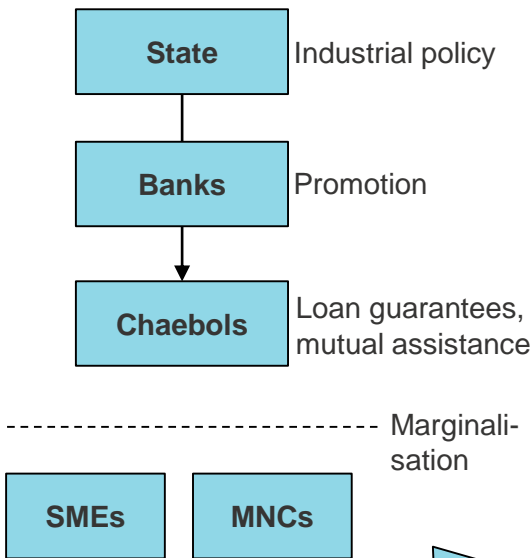
Drivers	Proxy	Sub-category
1. Economy	Total economy size (GDP), expected real GDP growth and unemployment	
2. Depth of capital market*	Size of stock market	Market cap of listed companies and number of listed domestic companies
	IPOs and public issuing activity	Market volume and number of issues
	M&A market activity	Market volume and number of deals
	Debt and credit market	Ease of access to loans, credit information index and lending rate
	SM liquidity (trading and volume), bank non-performance loans and financial market sophistication	
3. Taxation	Tax and administrative burdens	Entrepreneurship incentive, number of tax payments and time spent on tax issue
4. Investor protection and corporate governance	Quality of corporate governance	Disclosure index, director liability index, shareholder suits index, legal rights index and efficacy of corporate boards
	Security of property rights	Legal enforcement of contracts, property rights and intellectual property protocols
	Quality of legal enforcement	Judicial independence, impartial courts, integrity of the legal system, rule of law and regulatory quality
5. Human and social environment	Education and human capital	Quality of educational system and quality of science research institutes
	Labor market rigidities	Difficulty of hiring index, rigidity of hours index, difficulty of firing index and firing costs
	Bribing and corruption	Bribing and corruption index, control of corruption and extra payments and bribes
6. Entrepreneurial culture and deal opportunities	Innovation	Innovativeness index and capacity for innovation
	Science and technology journal articles	
	Ease of starting and running a business	Number of procedures to start a business, time needed to start a business and costs of business start-up
	Simplicity of closing a business	Time for closing a business and costs for closing a business
	Recovery rate	Corporate R&D and R&D spending and utility patents

Source: IESE Business School, University of Navarra, *Venture Capital and Private Equity Country Attractiveness Index* (2016)

Korea pursued substitution, while Malaysia, Taiwan and Vietnam pursued complementary strategy, with effects on SME landscape

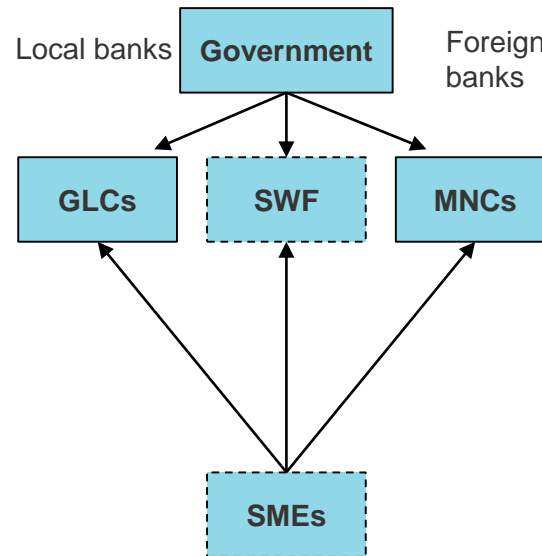
Comparison on national growth models

Korea (also Japan, China)
(substitution strategy)

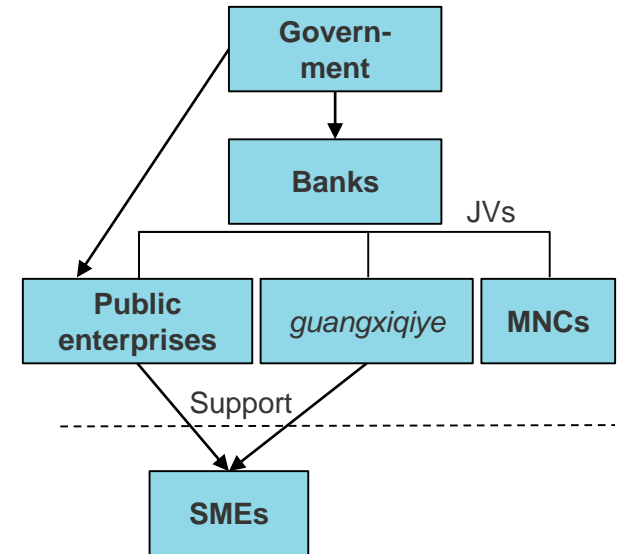


Unlike Japan, Taiwan and Singapore, Korean model required large outside financing (debt)

Singapore and Malaysia
(compl. strat. – int'l model)



Taiwan and Vietnam
(compl. strat. – semi-int'l model)



Vietnam pursues a semi-international complementary strategy similar to Taiwan model, yet with emergence of local conglomerates and weaker links to SMEs

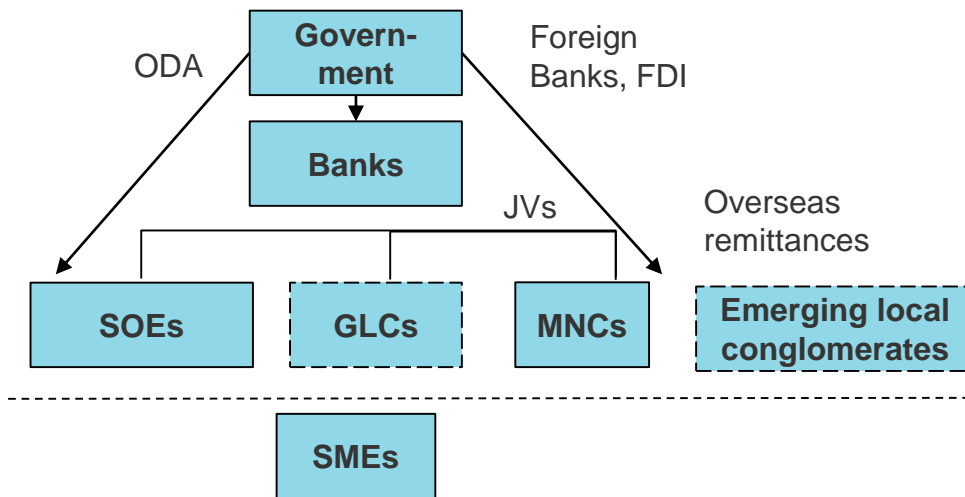
Note: MNC = multinational company, SME = small and medium sized enterprise, GLC = government linked company, SWF = sovereign wealth fund, SOE = 100% state owned enterprise

Source: Shin, Chang, *Restructuring Korea Inc.*, pp. 11-22; Ha Thanh, Nguyen & Klaus Meyer (2004); Van Chung, Vu (2015); Reddal analysis

Vietnam pursues a semi-international complementary strategy with emergence of local conglomerates and weak links to SMEs

Comparison on national growth models

Vietnam (compl. strat. – semi-int'l model)



- The Vietnam model is closer to Taiwan, with JV between SOEs and MNCs accounting for 25% of FDI capital (2013), driven by government equity/license requirements in sensitive sectors and unique access to local knowledge and natural resources
- Vietnamese SOEs are not only owned but also managed by respective line industries/local governments with strong political patronage
- Recent privatization and restructuring efforts of SOEs are slowly turning them to GLCs, which are closer to the Singapore model
- Recent reforms since 1986 "Doi moi" and influx of overseas remittances from Vietnamese expatriates have also encouraged the emergence of a few local conglomerates
- Linkages with SMEs are weak as their capabilities are not strong enough to participate in the value chains

Note: MNC = multinational company, SME = small and medium sized enterprise, GLC = government linked company, SWF = sovereign wealth fund, SOE = state owned enterprise, ODA = official development assistance

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Finnish PE industry is characterized by high public sector participation and is now improving effectiveness

Overview of PE sector in Finland

Large public sector participation

- Finnish PE firms gathered increasing amounts of funds until the 2007 crisis, but after that the flows have stagnated
- Government participation in the Finnish PE markets is among the highest in the world
- R&D grants and loans, and public sector PE investments, make up a significant part of financing for Finnish growth companies

Public sector network of players still too complex

- Finnish policy for financing innovative enterprises has become more streamlined over time
- Despite streamlining, Finland still has a complex public support structure for the venture ecosystem
- In addition to organizations directly under MEE or otherwise parliamentary governance, many NGOs support startups

Regulative changes needed for a functioning VC ecosystem

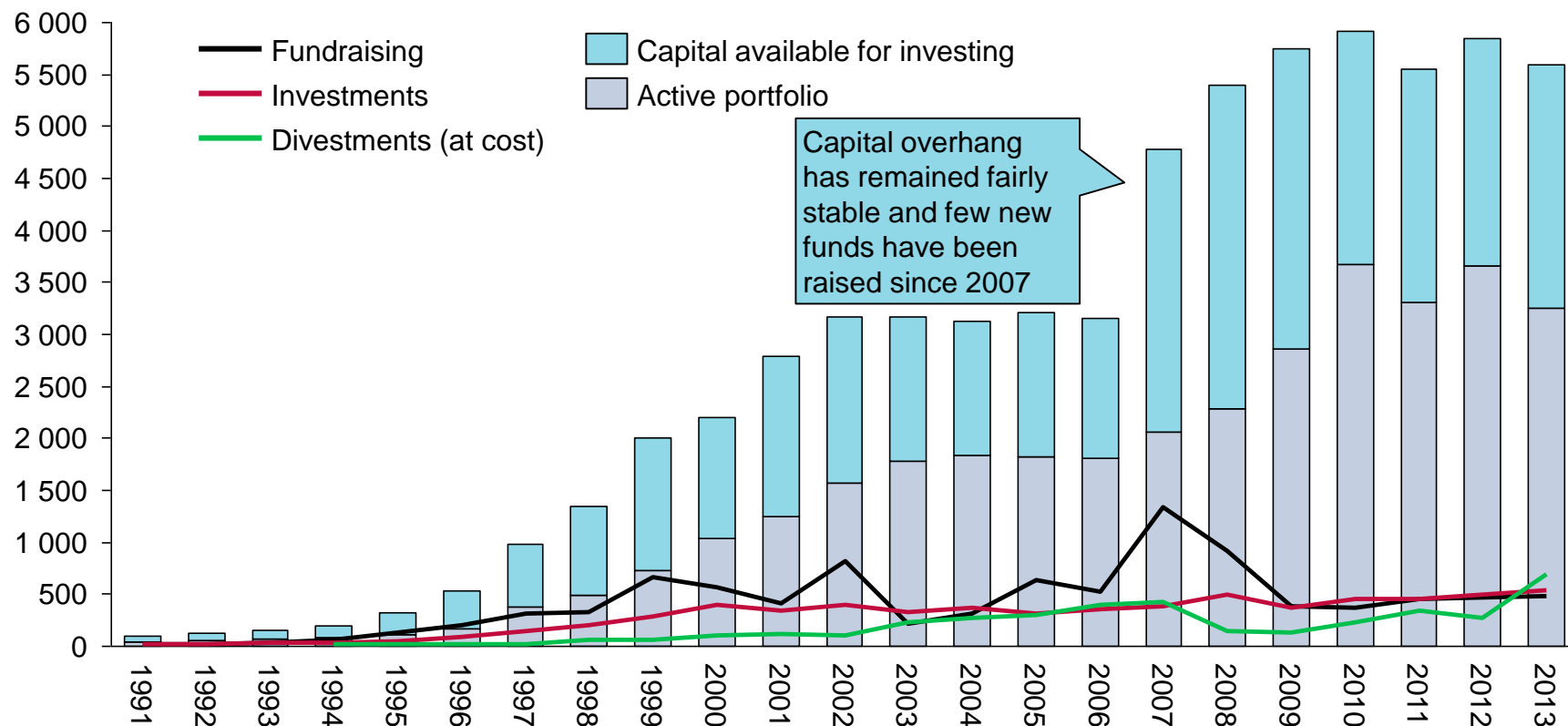
- A weak point continues to be the lack of a functioning ecosystem between early and later-stage VC
- Finnish Ministry of Employment and Economy aims to focus more on strengthening the VC ecosystem going forward
- Process to improve the public sector contribution to growth company financing has been complicated and slow
- Along the way, there has been clear input from both research and independent audits, but these have not been acted on fully
- To increase venture capital attractiveness for foreign and domestic investors MEE is now pushing for legislative/regulatory changes

Starting to learn what public policy is effective

- Although Finnish public policy perhaps started in the wrong end, actions are now starting to hit the right areas
- There has been good progress but some criticism still remains
- Copying the YOZMA model to Finland may not be straightforward – there are several important differences
- The YOZMA experience may provide some insight for how to set future Finnish public policy

Finnish PE firms gathered increasing amounts of funds until the 2007 crisis, but after that the flows have stagnated

Cash inflows, outflows and capital under management of Finnish PE firms, 1991-2013
MEUR

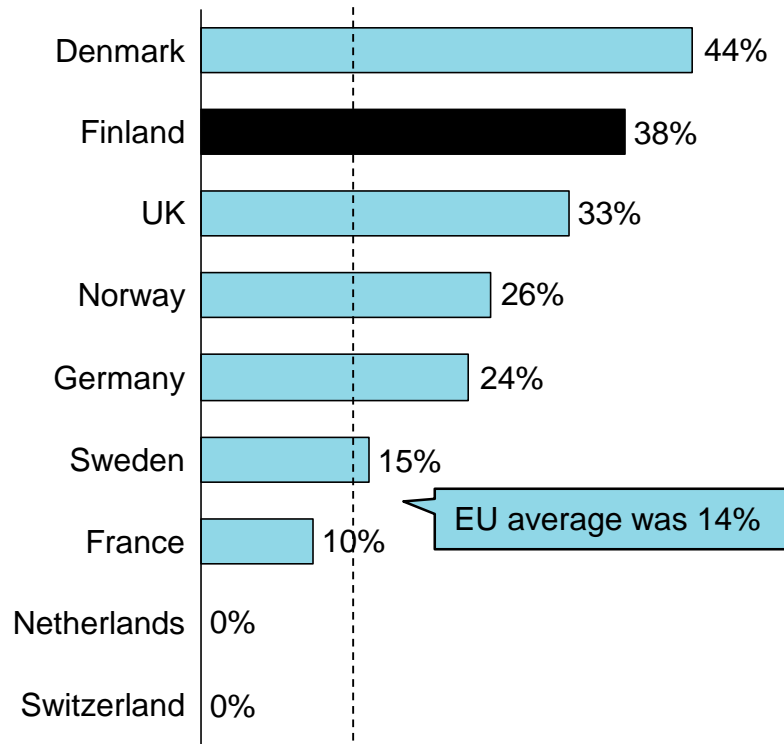


Source: FVCA; figures are best estimates aggregated from Finnish PE investors and other VC associations and complemented with other sources of data

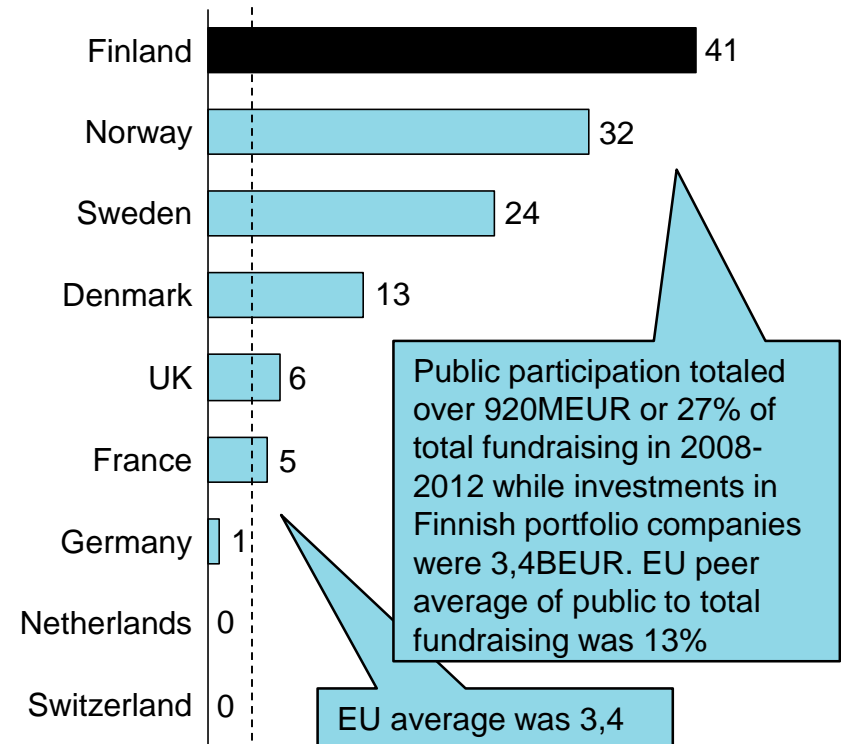
Government participation in the Finnish PE markets is among the highest in the world

Government share of private equity markets – Finland versus peers

Direct government investments of public fund commitments
2008-2012
Percent



Direct government investments, 2008-2012
EUR/capita

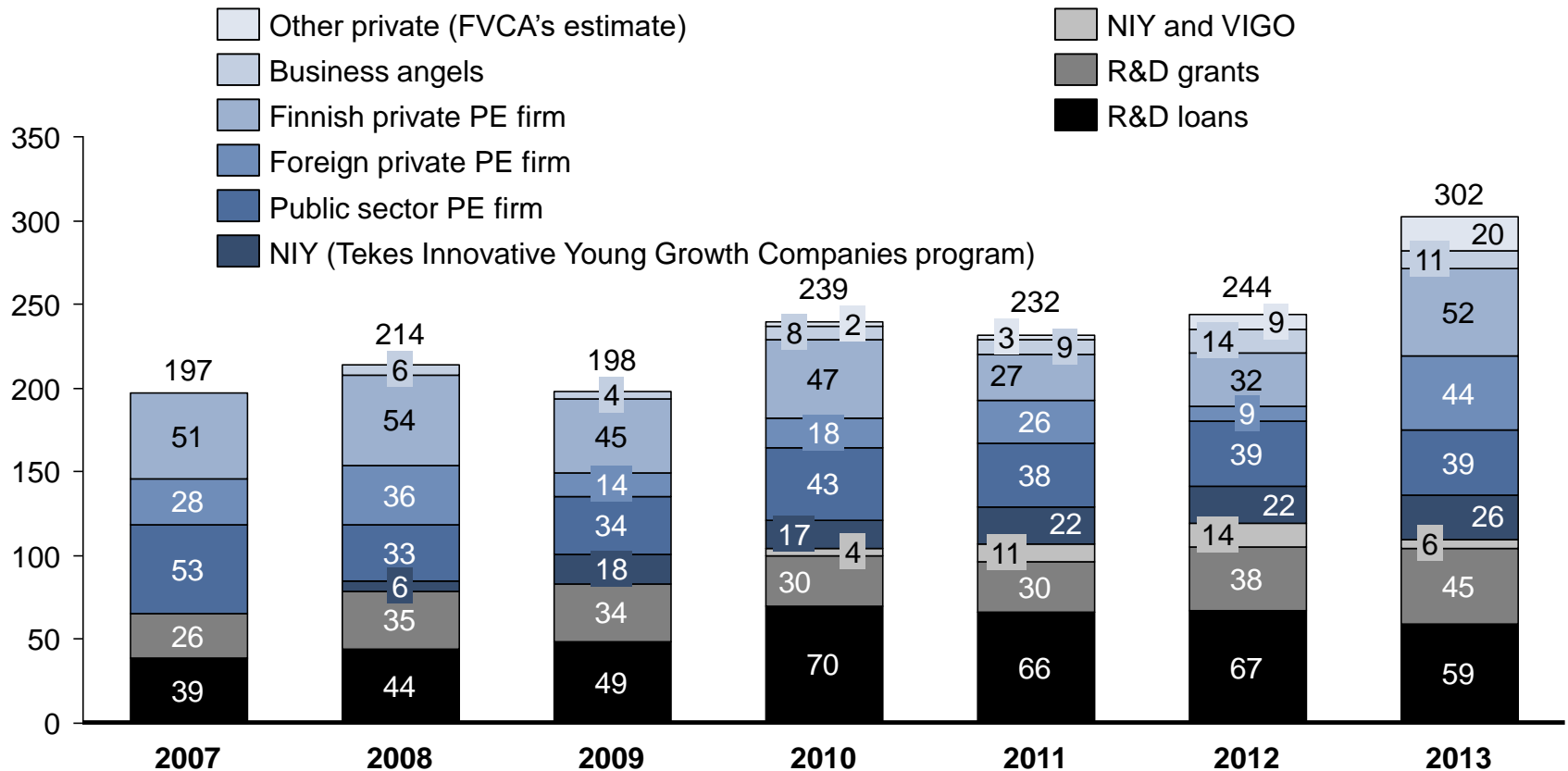


Source: Evaluation by the Ministry of Employment and the Economy, 2014, http://www.tem.fi/files/38395/TEMjul_1_2014_web_09012014.pdf

R&D grants and loans, and public sector PE investments, make up a significant part of financing for Finnish growth companies

Financing of young (under 6 year of age) enterprises, 2007 – 2013

MEUR

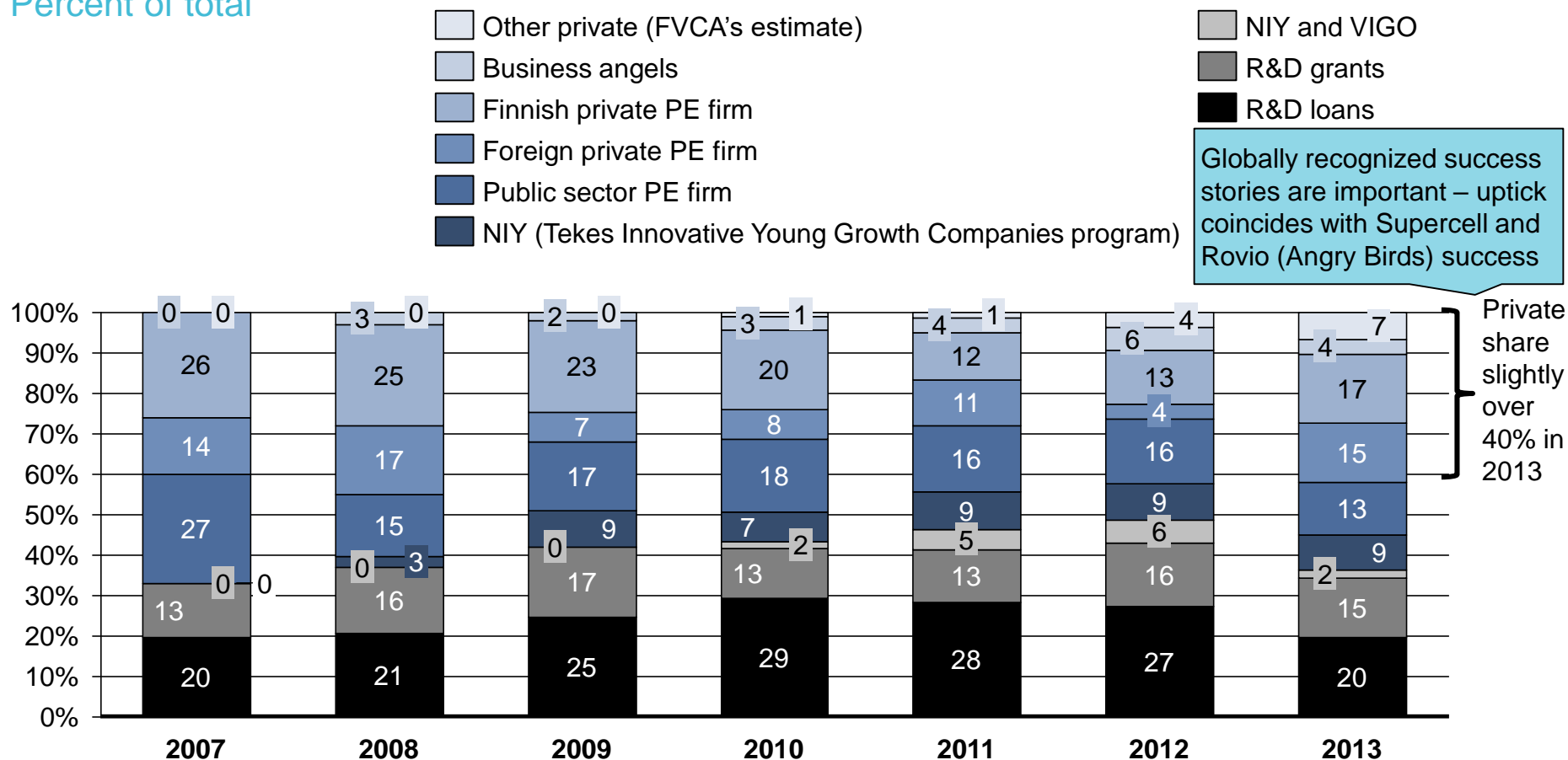


Source: Tekes, Finnvera, FIBAN (gathered by FVCA)

During 2007 – 2012 the private share of funding steadily decreased, but in 2013 there was a clear increase

Financing of young (under 6 year of age) enterprises, 2007 – 2013

Percent of total

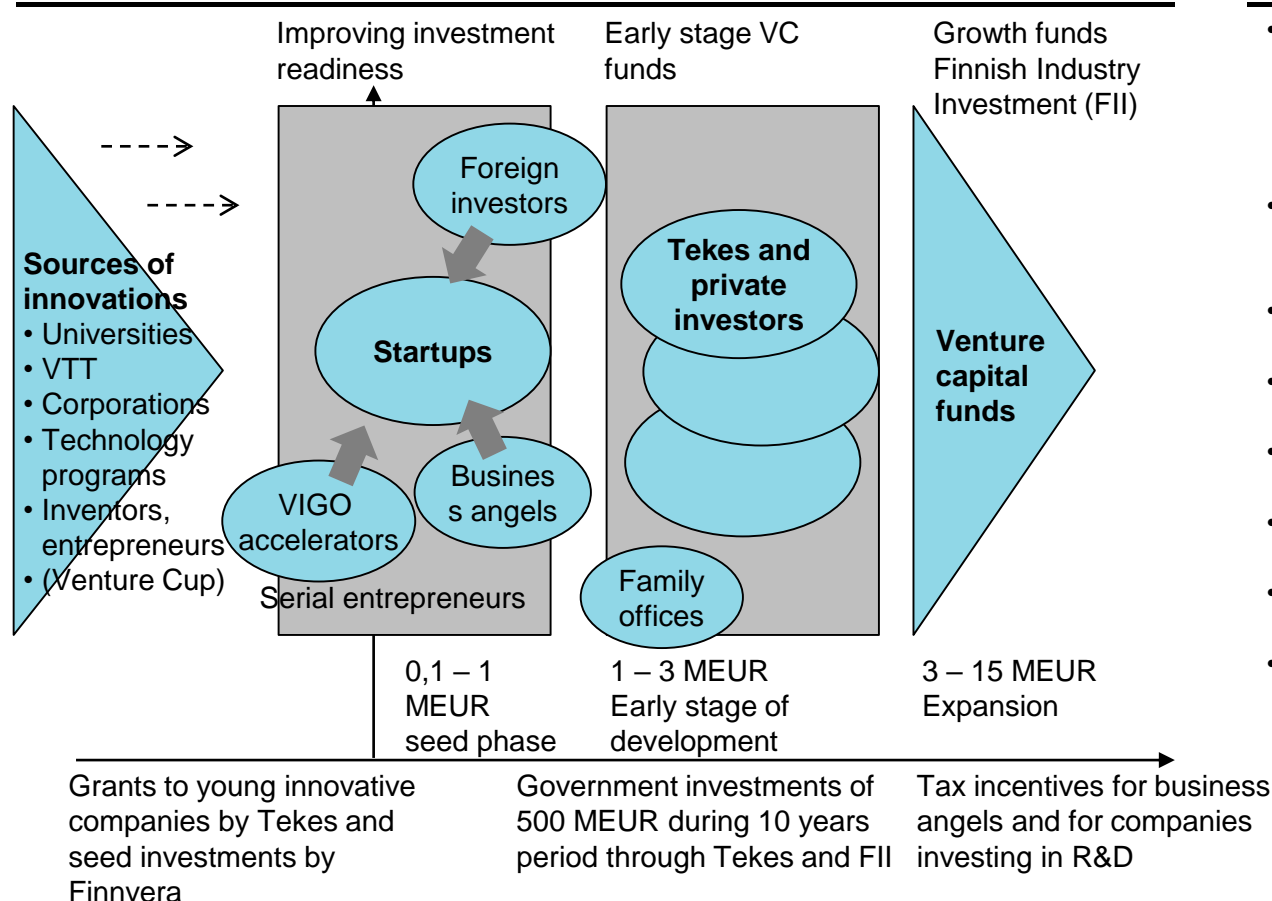


Source: Tekes, Finnvera, FIBAN (gathered by FVCA)

Finnish policy for financing innovative enterprises has become more streamlined over time

Financing of innovative enterprises – policy mix and changes

Strategy for financing of innovative enterprises (according to MEE, 2013)



Evolution of the policy mix

- Bringing continuity to the market with a fund of 1BEUR (over next 10 years, 60% FII, 40% TEKES) on top of earlier commitment of 100MEUR to FII and 40MEUR to TEKES
- Streamlining the seed and early stage government financing by clarifying roles of TEKES, FII, Finnvera
- Withdrawing from regional venture capital
- Changing priority from grants to equity investments
- Moving from direct investments to fund investments (fund-of-fund)
- Starting asymmetric profit sharing to attract private investors (TEKES)
- VIGO bringing capital and advice (from serial entrepreneurs)
- Privatising business angels' networking operations (task taken over by FIBAN, Finnish Business Angels Network, independent organization)

Source: Counsellor Pertti Valtonen, MEE, Int'l conference on entrepreneurship and innovation, Dubrovnik, May 23-24, 2013; interviews

Despite streamlining, Finland still has a complex public support structure for the venture ecosystem

Overview of main governmental funding organizations

Tied to the Ministry of Employment and the Economy (MEE)

English name	Description
Tekes - The Finnish Funding Agency for Innovation	<ul style="list-style-type: none"> • Most important publicly funded expert organization for financing R&D and innovation in Finland • Mainly invests in smaller startups through NIY (Young Innovative Companies program) and VIGO programs • Employs approximately 400 people in Finland and abroad, of whom 90 in regional Centres for Economic Development, Transport and the Environment (ELY Centres) • In the future, Tekes seed fund investments will extend its role from technology grants towards seed and early-stage venture fund investments, taking leading role through fund-of-fund operations
Finnvera - specialized financing company owned by the State of Finland	<ul style="list-style-type: none"> • Government run organization providing export financing (similar to KIEK) and financing in the SME sector (similar to KDB), operates mostly by granting or backing loans for companies • Direct venture investments through Aloitusrahasto Vera Ltd (Avera) – investments are managed by Veraventure Ltd which also makes investments in regional investment companies • Also makes PE investments through Matkailunkehitys Nordea Ltd investing in regional funds • Has decided to give up direct and fund-of-fund type operations, funds and investments being divested now
Finnish Industry Investment (FII)	<ul style="list-style-type: none"> • A fully government owned special purpose investment company, the biggest PE investor within public sector in Finland; assets under management 0.6B€, recently raised second growth fund (150MEUR) • Has made PE investments directly, during A and B rounds, and through funds focusing on Finnish VC and small buyout funds (no seed investing); however, going forward will focus on fund-of-fund investments only • In the old model, FII took a minimum of 10% stake in a company when investing, but never a majority share, and typically holds board seat (albeit rarely an active owner, more of an observer)
Finpro	<ul style="list-style-type: none"> • Works to attract foreign direct investment into Finnish companies (similar to KOTRA) • Also provides consulting in different phases of internationalization for Finnish companies (being privatized now) • Going forward, public sector support via Finpro will focus on SME sector globalization
Sitra, The Finnish Innovation Fund	<ul style="list-style-type: none"> • An independent public foundation which operates directly under the supervision of the Finnish Parliament • Has been involved in various investment models, but now only fund-of-fund (direct investments have been formally ended); focuses on programs more going forward
Finn Fund, Finnish Fund for Industrial Cooperation	<ul style="list-style-type: none"> • Finnish development finance company providing long-term risk capital for private projects in developing countries • Owned by the State of Finland (92,1%), Finnvera (7,8%) and Confederation of Finnish Industries EK (0,1%) • Focuses on promising projects in challenging markets, where commercial financing is hard to obtain

Source: Various, gathered from materials from above organizations (websites, reports, articles, interviews)

In addition to organizations under MEE or government, many NGOs support startups

Non-governmental players in startup ecosystem



Finnish Venture Capital Association

FVCA develops private equity and venture capital as an industry and promotes the interests of its members in Finland. FVCA is a member of the European Private Equity & Venture Capital Association (EVCA).



FIBAN

Finnish, national, non-profit association of private investors that aims to improve the possibilities for private persons to invest in unlisted potential growth companies.

See separate presentation on Startup Sauna, where serial entrepreneur mentors help companies probono (while looking for investment opportunities).

In addition, Arctic Startup, a private local venturing newsletter covering Finland and surrounding countries plays a key role in information dissemination and community building (see arcticstartup.com)



Aalto University

Aalto University, Helsinki area

Aalto University finances AaltoES (Entrepreneurship Society) and Startup Sauna directly, and it also offers premises to them (other leading universities are following this example also)

STARTUP-SÄÄTIÖ

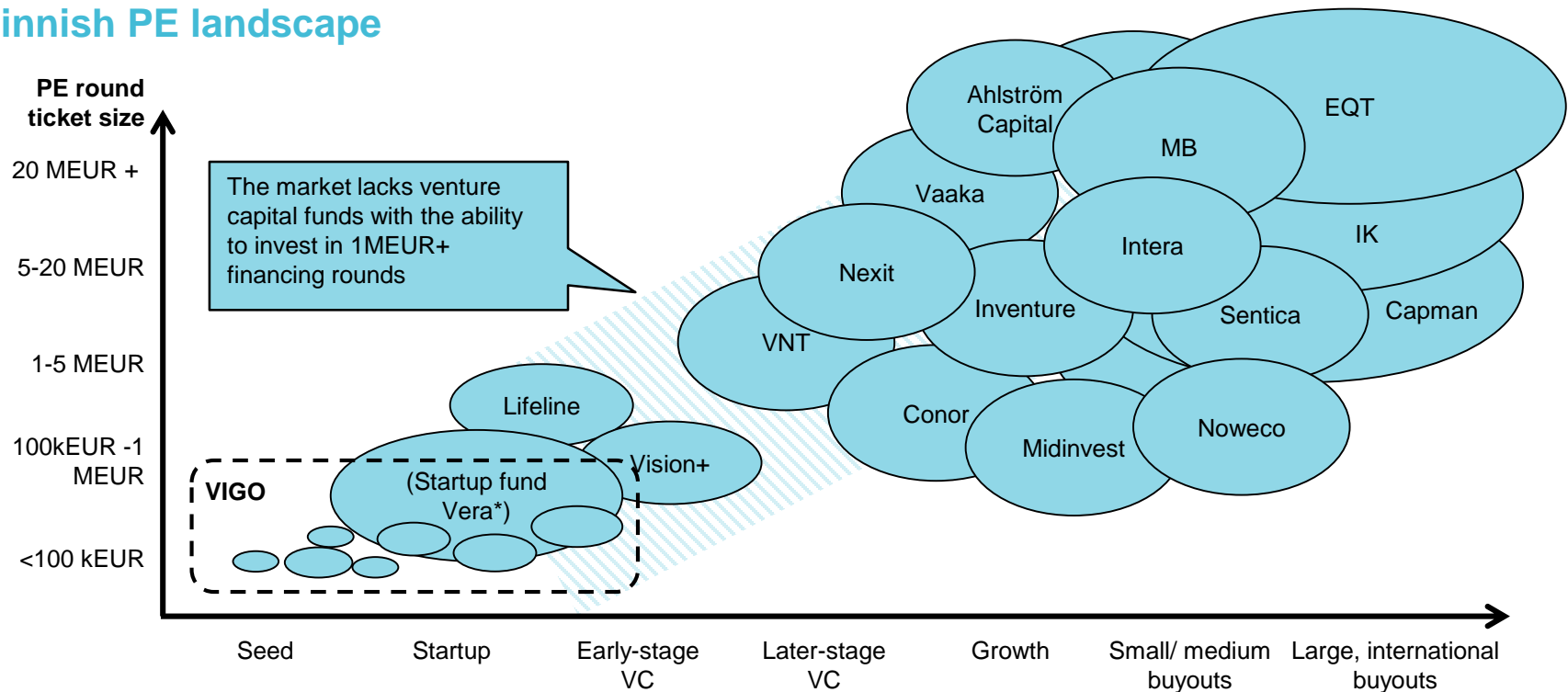
Startup-säätiö (Startup Foundation)

- The foundation supports entrepreneurship financing Startup Life, Startup Sauna and Slush as well as other ecosystem activities that help foundation achieve its goal (e.g. convertible loans to some Startup Sauna startups)
- Its equity upon starting was about one million euros of which €57 000 come from individual donors
- Sitra, the Finnish Innovation Fund, donated €300 000 and the rest of the money came from the Finnish Ministry of Economy and Employment, Tekes and Confederation of Finnish Industries

Source: Various, gathered from materials from above organizations (websites, reports, articles, interviews)

A weak point continues to be the lack of a functioning ecosystem between early and later-stage VC

Finnish PE landscape



“The key bottlenecks are lack of commercialization know-how, small investment sizes, large share of public sector and illiquidity of exit market. The underlying problems cannot be solved with additional liquidity alone as many are also qualitative in nature”

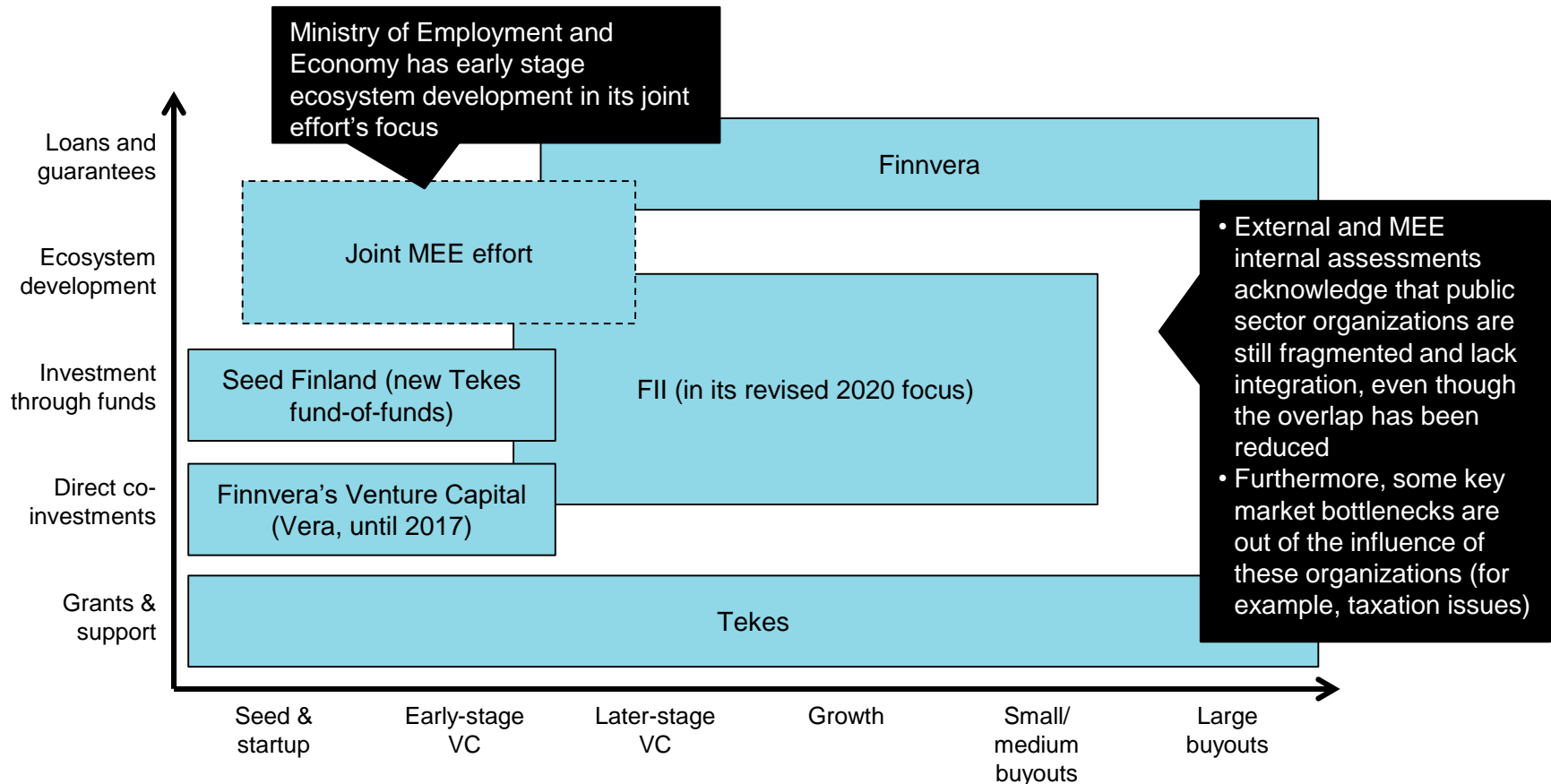
- Excerpt from the Ministry of Employment and Economy report, January 2014

*To be discontinued by 2017

Source: Evaluation by the Ministry of Employment and the Economy, 2014, http://www.tem.fi/files/38395/TEMjul_1_2014_web_09012014.pdf

Finnish Ministry of Employment and Economy aims to focus more on strengthening the VC ecosystem going forward

Illustration of public sector's role in future in PE market development



Source: Interviews; Evaluation by the Ministry of Employment and the Economy, 2014, http://www.tem.fi/files/38395/TEMjul_1_2014_web_09012014.pdf

The process to improve the public sector contribution to growth company financing has been complicated and slow

Key steps in Finnish public sector evolution in the venture capital space

Era

Player	"Clear roles"	"All under one roof"	"Streamline and avoid direct investments"
FII	<ul style="list-style-type: none"> FII to lead – failed, government did not have strong enough leadership 	<ul style="list-style-type: none"> Failed – government lacked muscle and funding 	<ul style="list-style-type: none"> Fund-of-fund (VC, PE)
TEKES	<ul style="list-style-type: none"> TEKES: Mainly grants and loans 	<ul style="list-style-type: none"> No change in investment policies 	<ul style="list-style-type: none"> Grants, fund-of-fund (seed, very early stage), leverage VIGO; introducing asymmetric profit sharing
Finnvera	<ul style="list-style-type: none"> Finnvera: Loans, investments 		<ul style="list-style-type: none"> Decided to phase out of investments (both direct and fund-of-fund), focus on SME debt instruments
Sitra	<ul style="list-style-type: none"> Sitra: Investments 		<ul style="list-style-type: none"> Phase out of direct investments, focus on programs, some fund-of-fund
Result:	<ul style="list-style-type: none"> All players investing in overlapping manner, many programs that confused entrepreneurs, inefficiencies 	<ul style="list-style-type: none"> Overlap and lack of coordination continued 	<ul style="list-style-type: none"> In progress

MEE now focusing on ecosystem development and legislation

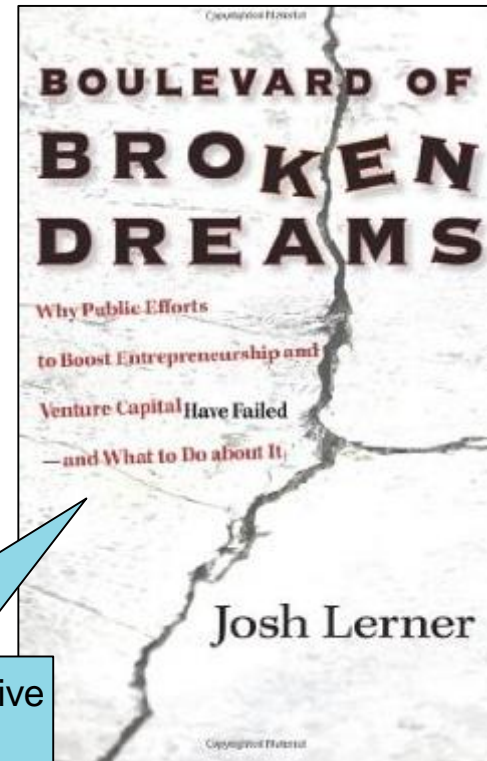
However, current situation still unclear and roles less than optimal – risk that big picture is lost (due to strong dependence on external parties) and loss of skills (due to transfer of task)

Source: Interviews, Reddal analysis

Along the way, there has been clear input from both research and independent audits, but these have not been acted on fully

Results from external research and independent audits of Finnish public sector

- Government should not be involved in direct investments
- Two audits (2009, international group of experts; 2010, Prof. Puttonen) suggested that all operations should be combined to one unit, and that all market term based investments should cease
- Josh Lerner also commented with similar views in his book
- Legislation (in particular tax) drives most market decisions, programs and funding are less effective
- Unfortunately, most of this advice has not been acted on with sufficient decisiveness



Still one of the most exhaustive books written about public policy successes and failures — must read!

Source: Interviews; Lerner, Boulevard of Broken Dreams (2009)

To increase venture capital attractiveness for foreign and domestic investors MEE is now pushing legislative/regulatory changes

Main legislative/regulatory bottlenecks for venture financing identified by MEE

Action	Current situation	Probable estimated impact
Removing obstacles for foreign investments into funds in Finland	<ul style="list-style-type: none"> Currently, investors from countries that do not have a tax treaty with Finland suffer double taxation and hence do not invest in funds in Finland An easy solution would be to extend non-double taxation to include countries with which Finland has an information sharing agreement While foreign direct investments do not suffer from similar double taxation, investing through funds would be less risky and a leaner approach 	<ul style="list-style-type: none"> Inflows on the order of 100MEUR+ in investments into funds in Finland both from foreigners and Finns living abroad Would also reduce existing administration (currently some fund managers establish their fund outside the Finnish borders to avoid double taxation)
Making investments by foundations into PE funds tax exempt (similar to their investments into stock listed companies and mutual funds)	<ul style="list-style-type: none"> Foundations and not-for-profit organizations can invest into stock listed companies and mutual funds tax-free profits, while their investments into PE funds are not; as a result, these investors with over 10B€ in assets do not participate in venture capital The change would imply treating investments into PE funds under the same principles as investments into stock and mutual funds 	<ul style="list-style-type: none"> Given that this investor class has assets in excess of 10B€, even a small percentage reallocation would imply 100M€+ inflow into private equity/venture capital
Making private investments into PE funds taxation by capital gain tax (currently income tax)	<ul style="list-style-type: none"> Investments by private individuals into PE funds are largely taxed by the high income tax rate; as a result, wealthy individuals choose not to invest directly because of the unfavorable taxation Taxing private investments into PE funds by capital gains tax would make these investments more attractive 	<ul style="list-style-type: none"> Inflows on the order of 10M€+, and increased venture capital participation of wealthy individuals Reduced administration and risk, as some direct investments would be replaced by fund investments
Making losses from loans to venture companies deductible in taxation	<ul style="list-style-type: none"> Private individuals can deduct losses from direct investments during the following five years Extending this to equity loans would simplify the investment process (since a formal valuation could be avoided) 	<ul style="list-style-type: none"> Inflows on the order of several M€ Increased participation of private individuals in venture capital

Source: Publication by the Ministry of Employment and the Economy, 2014, www.tem.fi/files/40071/TEMjul_20_2014_09062014.pdf

Some changes are also proposed to improve the efficiency of the financial eco-system

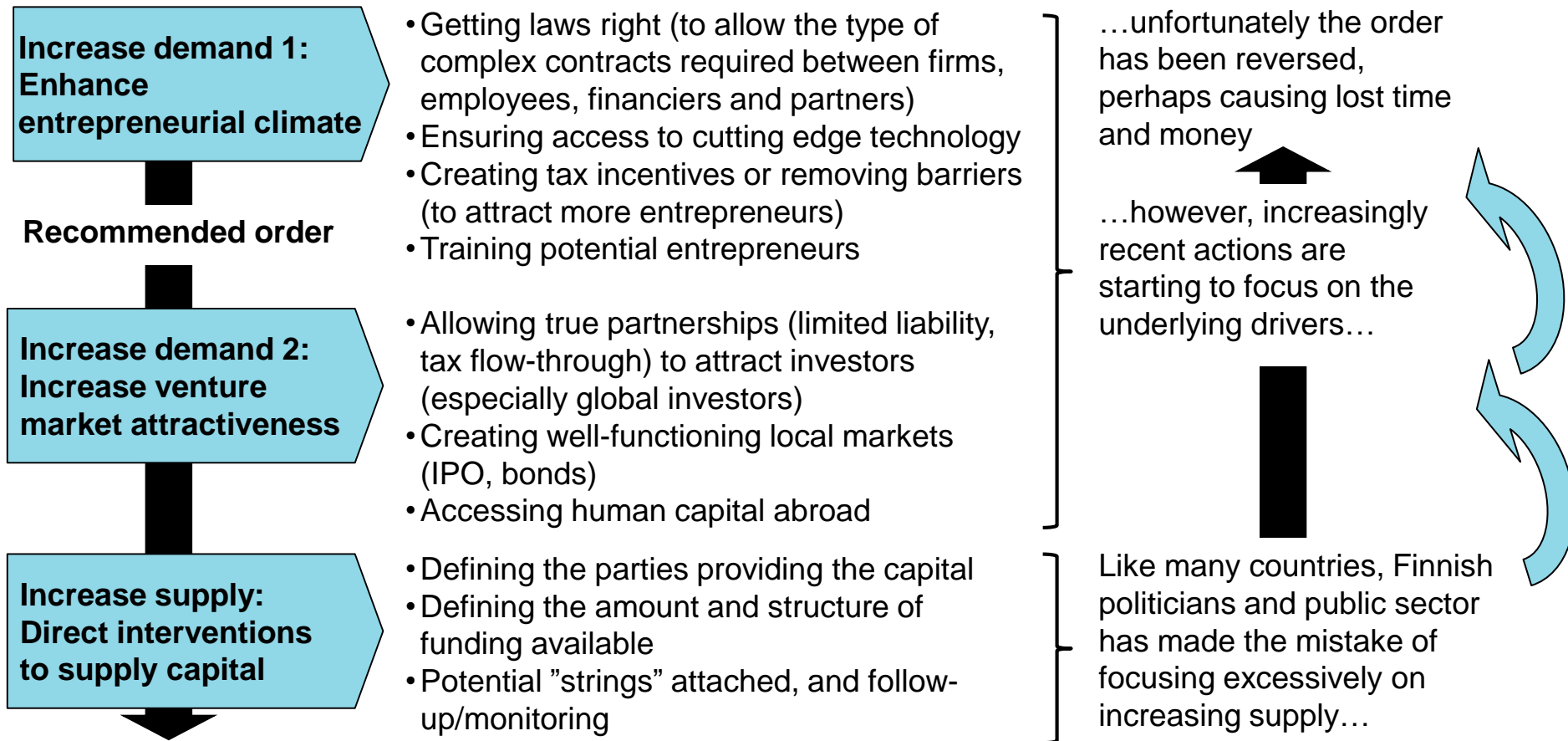
Main legislative/regulatory bottlenecks for venture financing identified by MEE (cont'd)

Action	Current situation	Expected impact
Extending intra-EU equity swap tax provisions (used in mergers) to cover also tax treaty countries	<ul style="list-style-type: none"> Currently, in a merger or acquisition that is done via equity swap, the gains made (on paper) are immediately taxable if one of the companies is from outside EU, although no cash is exchanged in the transaction; this effectively stops this type of transactions For transactions inside the EU, this is not the case; extending the same policy to companies outside EU would make this type of transactions feasible 	<ul style="list-style-type: none"> More effective M&A market, better opportunities for Finnish companies to enter into corporate transactions with foreign firms More dynamic venture ecosystem, with improved connectedness to foreign markets
Removing double taxation from investments into listed investment companies	<ul style="list-style-type: none"> While investments into stocks or mutual funds do not suffer from double taxation, investments into listed investment companies do; as a result, it is more difficult for listed investment companies to attract funds Investments into listed investment companies should be treated similarly to investments into stocks or mutual funds (as in Sweden) 	<ul style="list-style-type: none"> Inflows on the order of 10M€+, and increased venture capital participation of private individuals Improved liquidity of venture capital investment category
Removing classification driven limitations of Finnish pension funds to invest in unlisted Finnish firms	<ul style="list-style-type: none"> Unlisted companies are classified into the most risky class ("other investments") when assessing solvency requirements of Finnish pension funds; this prevents larger allocation to this investment category (currently 3-5%, depending on pension fund) Allowing some reclassification is reasonable since company data is readily available, monitoring occurs by both pension and PE/VC fund managers, and the risk is diversified (fund investments) 	<ul style="list-style-type: none"> An allocation increase of 1% corresponds to 1-2B€ inflow The reallocation would not materially affect the solvency of pension funds
Implementing the government's program to improve bond market and simplifying IPO	<ul style="list-style-type: none"> The government has a structural policy program to improve the bond markets (including Finnvera) and to make IPOs easier (through First North) 	<ul style="list-style-type: none"> Several 100M€ in bonds to SMEs Sweden has 150 First North listings (Finland currently less than 10); could expect tens of listings more, and several 100M€ capital raised

Source: Publication by the Ministry of Employment and the Economy, 2014, www.tem.fi/files/40071/TEMjul_20_2014_09062014.pdf

Although Finnish public policy perhaps started in the wrong end, actions are now starting to hit the right areas

Main categories of public initiatives to stimulate new venture activity by Lerner



Source: Lerner, Boulevard of Broken Dreams (2009); interviews, Reddal analysis

There has been good progress but some criticism still remains

The good and the bad, based on comments from ecosystem participants

- The government continues to be active, and has been countercyclical
- Finland has had some world class success stories (Supercell, MySQL, Blomberg, Linux; in 2014 facebook has acquired Moves and Pryte, and Google just announced acquiring drawElements; prior Google has acquired for example Jaiku) and has built solid technology competence areas (gaming and graphics, core IT, some hardware technology areas); increasingly an active venturing environment is being built up (especially Helsinki)
- Mid-cap buy-out PE is working well with good returns and experienced teams; in venture capital, several promising venture capital fund management teams
- Have not been able to hit root causes (such as tax/legislative barriers to create demand through increasing attractiveness to become an entrepreneur, attracting foreign and domestic private investors, and to leverage local academic and corporate science, research and technology so that cutting edge technology is made accessible to ventures)
- Failure to recognize the importance of global interconnections and adherence to global standards, as well as limited or no collaboration with key neighboring markets (such as Sweden, Russia, Germany), let alone US, Israel or UK (Note! There has been several "study visits" and knowledge exchange, but not true operative collaboration which is critical for success)
- Still confusing and complex public sector network of players after 2 decades, funds spread too thin
- Weak owner, lack of leadership – the government has let the organizations under it act and decide on their own; at times, quite non-transparent and haphazard decisionmaking
- Feedback in the form of research results and audit results have not been acted on decisively, and evaluation of programs and actions has not been fully transparent; no public scrutiny or benchmarking of domestic fund performance where public sector has been a key investor
- Few venture backed companies have risen to the Helsinki stock exchange (in US 13%, Finland about 8%)

Source: Lerner, Boulevard of Broken Dreams (2009); interviews; Reddal analysis

If we look at the Finnish public efforts using Lerner's criteria, the results are mediocre but with some improvements expected

Evaluation of Finnish public efforts based on Lerner's framework

Category	Key elements	Current status	Expected developments
Things to emphasize	<ul style="list-style-type: none"> • Build the environment for ventures first • Leverage local research effectively • Conform to global standards • Let market provide directions • Avoid "overengineering" of programs • Recognize the long lead times • Avoid programs that are too small or too big • Understand the need to connect with entrepreneurs and investors overseas • Institutionalize careful evaluations • Adapt programs flexibly (refine/kill) • Seek to actively minimize "agency problems" • Make education part of the initiative (overseas investors, local entrepreneurs, public sector) 	<p>Good</p> <p>Mediocre/poor</p> <p>Mediocre/poor</p> <p>Mediocre</p> <p>Mediocre</p> <p>Good</p> <p>Poor</p> <p>Poor</p> <p>Mediocre</p> <p>Mediocre</p> <p>Mediocre</p> <p>Mediocre</p>	<p>Increased focus on legal/regulative</p> <p>Aalto ES/Startup factory</p> <p>Increased focus on legal/regulative</p> <p>Expect better coordination</p> <p>Private sector partially covers this</p> <p>Taking some steps now</p> <p>Increased market participation</p> <p>Private sector partially covers this</p>
Things to avoid	<ul style="list-style-type: none"> • Unqualified mandates to local institutional investors to make larger allocations to VC • Substantial up-front tax incentives • Reliance on intermediaries to manage programs • Matching ill considered incentives offered by other governments 	<p>Poor</p> <p>Potential issue</p> <p>Issue in some cases (VIGO)</p> <p>No issue</p>	<p>No improvement in near term</p> <p>Some tax incentives planned</p> <p>Expect increased scrutiny</p>

Source: Lerner, Boulevard of Broken Dreams (2009); interviews, Reddal analysis

The weakness of Finnish public efforts stem mainly from excessive domestic focus, and inability to renew efforts actively

Evaluation of Finnish public efforts based on Lerner's framework

Key elements (weak areas)	Current status/commentary
<ul style="list-style-type: none"> • Leverage local research effectively • Conform to global standards • Let market provide directions • Avoid "overengineering" of programs • Avoid programs that are too small or too big • Understand the need to connect with entrepreneurs and investors overseas • Institutionalize careful evaluations • Adapt programs flexibly (refine/kill) • Seek to actively minimize "agency problems" • Make education part of the initiative (overseas investors, local entrepreneurs, public sector) • Unqualified mandates to local institutional investors to make larger allocations to VC 	<ul style="list-style-type: none"> • Mediocre/poor; some universities and professors are more active, but the role of technology transfer offices has been weak (in most cases licensing has been cumbersome and focused on short-run returns) • Mediocre/poor; legislative barriers for foreign investment still significant • Mediocre; in practice FII participates in all local VC funds with a significant stake, and is considered a gatekeeper; MEE attempts to introduce asymmetric profit sharing has not succeeded; a broader approach to attract a range of specialized funds has not been taken • Mediocre; especially TEKES programs have been seen as bureaucratic • Poor; especially in the past efforts were split into small local fragments, and although this is starting to improve it is still an issue • Poor; the public efforts in connecting internationally to drive the development of the entrepreneurial ecosystem have been ineffective (more recently "Slush" has started to change this in a massive way) • Poor; while there has been evaluations, they have not been acted on and in other cases the evaluations have been overly positive; performance data not actively publicized, nor is comparative data on program effectiveness • Mediocre; adjustments have been slow despite explicit recommendations • Mediocre; there is little turnover of staff, essentially creating a stale network of key decisionmakers • Mediocre; while there is considerable educational programs towards entrepreneurs, few are effective; at the same time, inadequate efforts have been made to educate overseas investors and the public sector • Poor; due to inwardly focused programs with mainly domestic participants, it seems fair to say that market have been flooded by capital to some degree (with resulting poor returns among all government entities investing directly)

Source: Lerner, Boulevard of Broken Dreams (2009); interviews, Reddal analysis

Copying the YOZMA model to Finland may not be straightforward – there are several important differences

Views on applying YOZMA model in Finland

- While asymmetric profit sharing could be implemented (FII has not used it, but TEKES will apply it going forward) it is believed that another key element – strong networks* – is missing (US-Israel networks in the venture capital ecosystem much stronger than those of US-Finland)
- Israel may benefit both from the high technology activity (partly driven by military activity) as well as higher isolation than the European countries (leading VCs have mainly located their office only in London, and instead staffers travel to most European cities, including hot spots like Berlin and Stockholm)
- Currently obtaining funds is not the key issue – the best Finnish companies can receive funding globally, and from top tier venture funds; the key bottleneck is having enough strong companies lead by strong founder-CEOs; thus focusing on funding mechanisms and funding availability might not have as much impact as it did in Israel
- (FII apparently has tried to impose some limitations in its fund investments, requiring investments into Finnish target companies, but this approach only works with B-tier and lower funds; for top notch funds FII is both too small and without negotiation power)

*In discussions with YOZMA the importance of the “Jewish network” was downplayed – asymmetric profit sharing had a bigger role according to YOZMA
Source: Interviews

Some recent interviews and articles also highlight the need for professional leadership and building an international community

Perspectives on building a venture ecosystem in a city or region

We are already the number-one start-up city in Germany. But that's not enough. We want to be Europe's leading start-up hub. To achieve this, we all have to pull together: politicians, established companies, organizations that support businesses, chambers of commerce and professional associations, and—of course—entrepreneurs. For a long time, key market players were completely unaware of start-ups. Happily, that is now all in the past. To take the next step, we need to continue improving our welcoming culture—that means offering additional multilingual support and making visits to government offices more customer friendly. We need to better deploy our excellent resources in research and academia to generate spin-off businesses, and for that we need universities to develop a more pronounced entrepreneurial spirit. Additionally, we need to improve coordination among individual players: who offers what, who possesses what expertise, and who is the right person to contact.

- Klaus Wowereit, Mayor of Berlin

...the most successful share several important characteristics: an outstanding leader with a track record of delivering outcomes, direct access to top leadership, talented staff with excellent communication and problem-solving skills, and the ability to use soft power to influence ministries.

Based on the problem definitions and the identified root causes, delivery labs can also be used to assess whether existing solutions are still adequate. Some employ “premortem analysis,” a managerial tool used in the private sector to identify implementation obstacles (exhibit). In step one of such an analysis, all initiatives to be implemented are outlined. Then, delivery-lab participants are asked to imagine a worst-case scenario for each initiative and predict why it might fail. Next, responses to each potential failure are designed. To track the progress of initiatives, some start-up delivery units publish an annual report after a delivery lab.

Source: http://www.mckinsey.com/insights/public_sector/Scaling_a_start_up_community_an_interview_with_Berlins_mayor,
http://www.mckinsey.com/insights/public_sector/Creating_growth_clusters_What_role_for_local_government

Other countries can leverage the lessons learned from the Finnish public sector actions

Recommendations for public policy supporting venturing

1. Approach the process in the right order – before flooding market with funds (supply side), make sure to address issues on demand side (good entrepreneurial climate that attracts top notch founder-CEOs, and an attractive venture capital market that pulls in both foreign and domestic capital); while politicians like to “throw money at the problem”, real impact requires fundamental adjustments (including both demanding legislative/regulatory changes, as well as cultural/mind-set change!)
2. Leverage the local academic scientific and industrial research base – make sure university technology finds a way into an effective commercialization process (connect all sources of technology into a well working entrepreneurial and venture finance ecosystem, ensure there are working mechanisms in place for fast practical and effective technology transfer, where rewards are shared based on success; avoid high upfront licensing fees)
3. Understand and respect the need for conformity to global standards, and the importance of global interconnections, nurture and build a true global community
4. Watch out for agency problems, fragmentation of efforts, overcomplicated public sector network of players, and institutionalize transparent and careful evaluations of initiatives (including broad based benchmarking)

Agenda

Iran is entering a new phase, where private equity can help drive growth especially in the SME and technology startup sectors

Finland, South Korea, Malaysia and Vietnam have all gone – or are going – through a similar process and represent different stages of maturity

Finland has built its private equity ecosystem step by step, but some gaps still remain

Korean private equity is expanding rapidly, but is polarized and suffers from unclear and ever changing regulation

Malaysian private equity is still early on, but can play a key role in building up SME capabilities, and has a strong SWF element

Taiwanese private equity faces both challenges and opportunities, but seems to be in a political gridlock

In Vietnam foreign capital is starting the private equity sector, but the legislative framework is still missing

Iran can benefit from the experiences of these countries, but must also address fundamental issues in its economy

Korean private equity market has some unique characteristics less seen in developed markets

Overview of PE sector in Korea

Fragmented capital allocation

- LPs place high importance on PE houses' brand name; newly founded PE houses often need to work with major PE houses in order to raise funding
- Registration requirement for PEF GP is 100MKRW capital; further, Financial Supervisory Service disqualifies those that lack track record; new PE houses often collaborate with incumbent PE houses to build track record
- Some GPs collaborate with each other primarily to raise more funding (rather than to create real synergy)

LP controlled market

- Due to lack of track record among GPs when PEFs were introduced in 2004, LPs (most being government linked) had more control in deciding terms and conditions of limited partnership agreement (LPA)¹
- Management fee rate of Korean GPs is comparatively lower than that of the U.S., at 1.12% and 2% respectively (as of 2012)

PE houses in corporate legal entity form

- GP/fund manager of PEFs are not categorized to belong to financial investment sector; many PE houses, or financial sponsors, when acting as GPs, use the form of a regular coporation rather than partnership or LLC (for example MBK, Han & Company, VIG)
- Capital requirement of 1BKRW for VC firm to be certified by SMBA² limit individuals from founding VC firms as partnerships
- For corporate PE and VC firms, developing a good bonus scheme is critical to incentivize employees; LPs pay close attention to bonus schemes when selecting GPs

Regulation of both fund managers and funds

- In the U.S. only fund managers with AUM over 150MUSD are subject to registration with SEC and there is no oversight of funds
- In Korea, fund managers and their funds are subject to oversight by Financial Supervisory Service
 - PEF managers need to be "registered" while all other public and private fund managers need to be "certified"

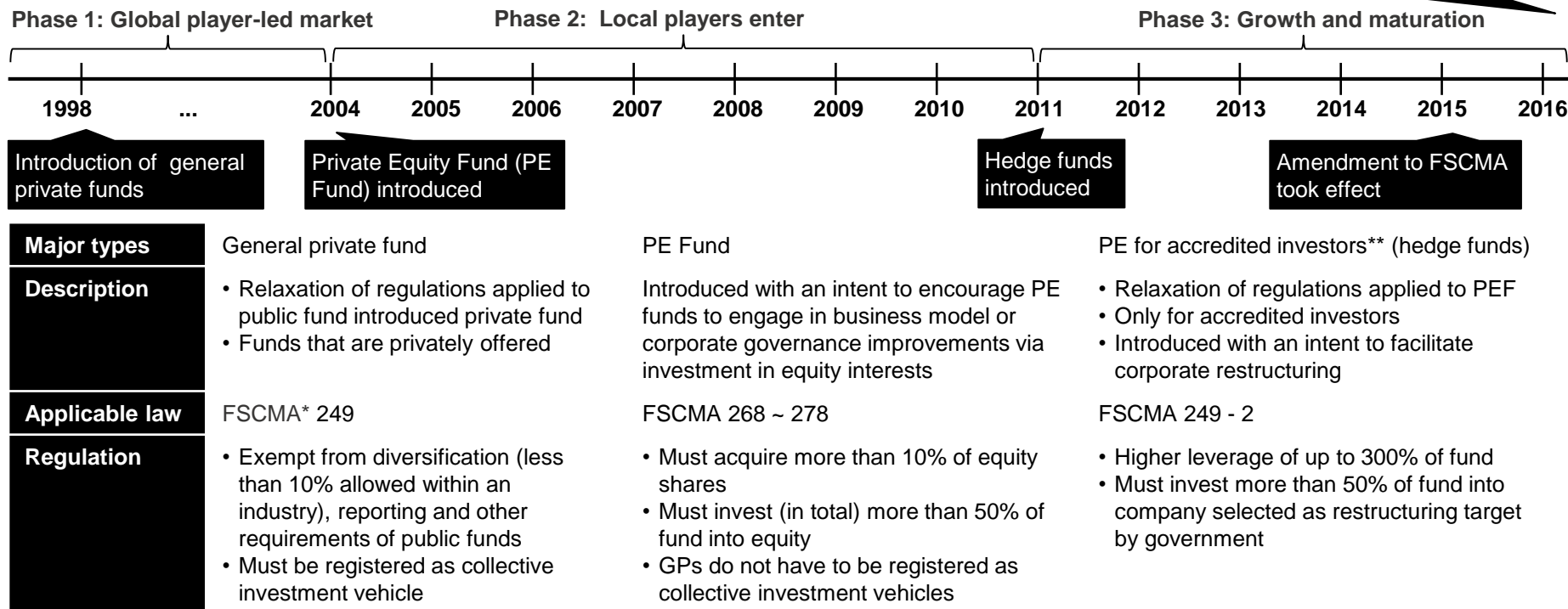
Note: ¹"Hapja-hoesa" is the only legal form defined for domestic PEF; articles of PEF incorporation serves the same role as LPA; ²Small and Medium Business Administration

Source: Jipyung, PEF의 이해 (2016) pp.5 – 6; The Bell (www.thebell.co.kr); interview with a managing director of Korean VC firm

Korean PE industry development continues to be affected by policy; deregulation and tax breaks affect fund behavior

Korean PE industry history and key milestones

From 2017, PEFs that invest over 50% of its fund to SMEs or venture companies will get tax benefits equal to that of VCs



Implication

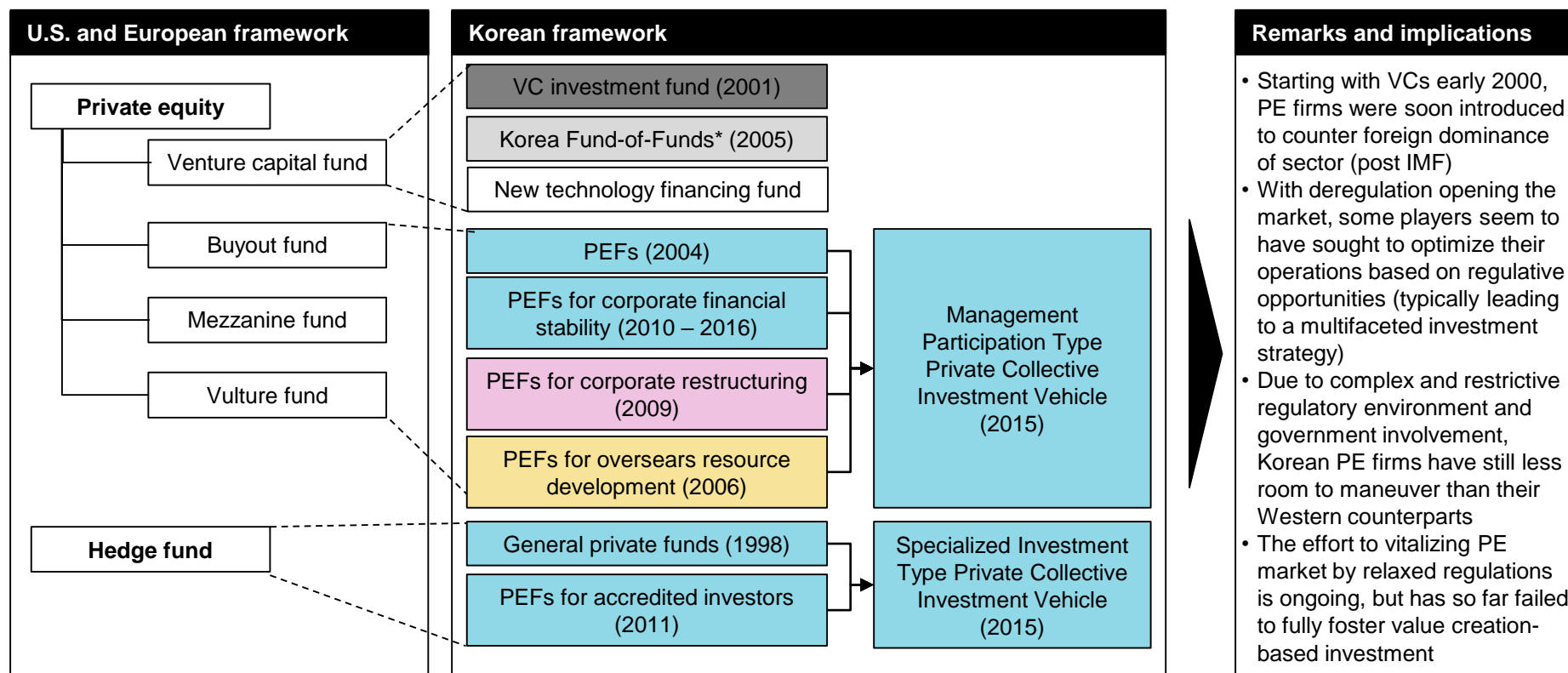
Korean investment firms and the overall Korean private equity industry may have been distracted by all the regulatory changes – in some cases falling for “regulative optimization” rather than true performance development and capability building

*Financial Investment Services and Capital Markets Act (FSCMA); **Accredited investors indicate sophisticated investors including government, financial institutes and Korean Deposit Insurance Corporation Source: Financial Supervisory Service, '15년 PEF 동향 및 시사점, 2016

During the 2000s, the Korean private equity legal framework has developed a lot, and left its mark on the industry structure

Regulatory framework in Korea

- Financial Investment Services and Capital Market Act
- Industry Development Act
- SME Establishment Act
- Special Measures for Promotion of Venture Businesses Act
- Overseas Resource Development Business Act

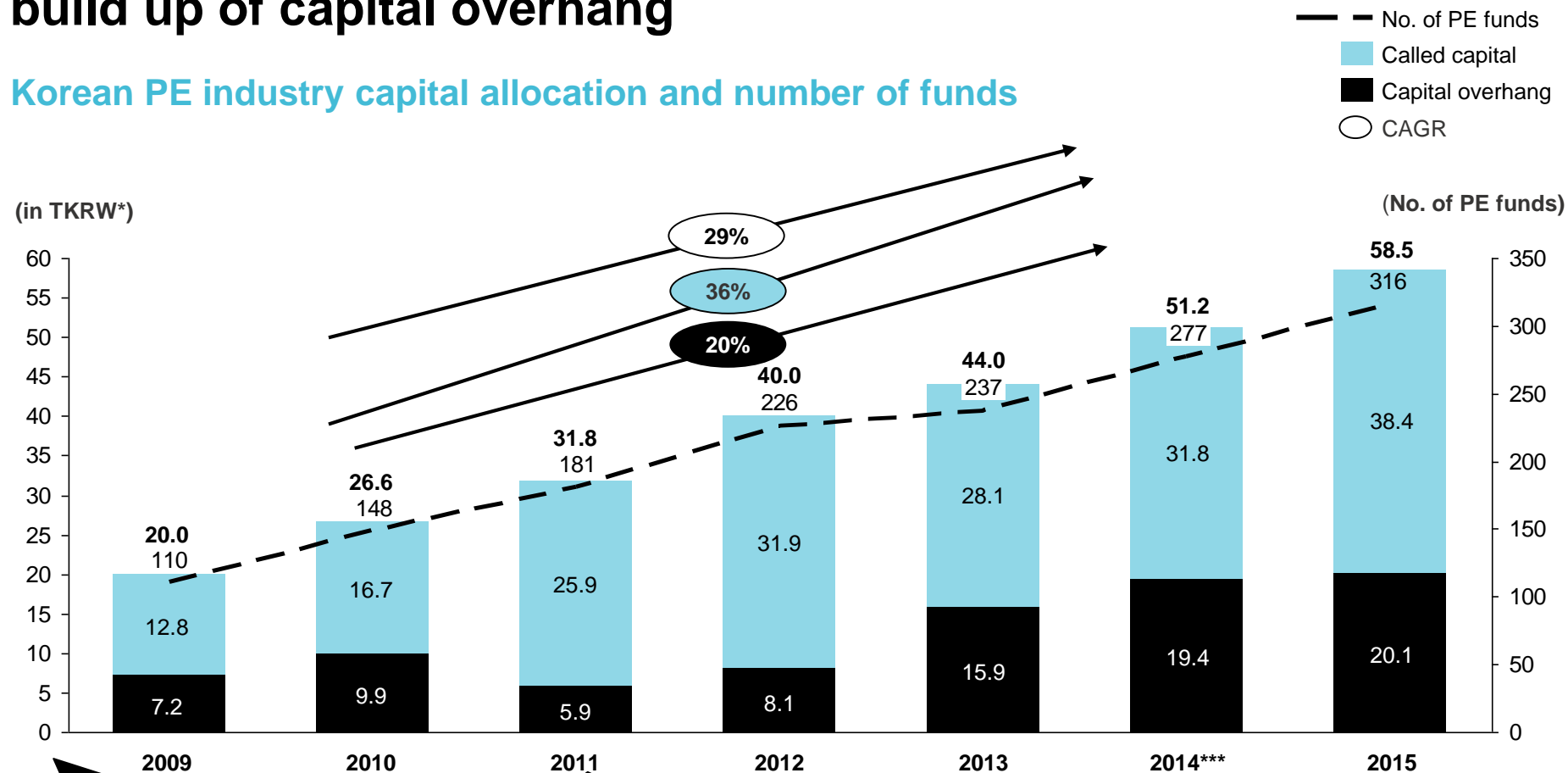


Source: Han, Sangjin (2015); Financial Services Commission; Lee and Han (2013)

*In Korea, PE fund-of-funds are only allowed under special cases to promote venture businesses

The Korean PE industry has grown rapidly, with some recent build up of capital overhang

Korean PE industry capital allocation and number of funds



Private Equity Fund (PE Fund) legislation introduced in 2004

Hedge fund legislation introduced in 2011

Amendment to FSCMA** took effect in 2015, reducing restrictions on PEs

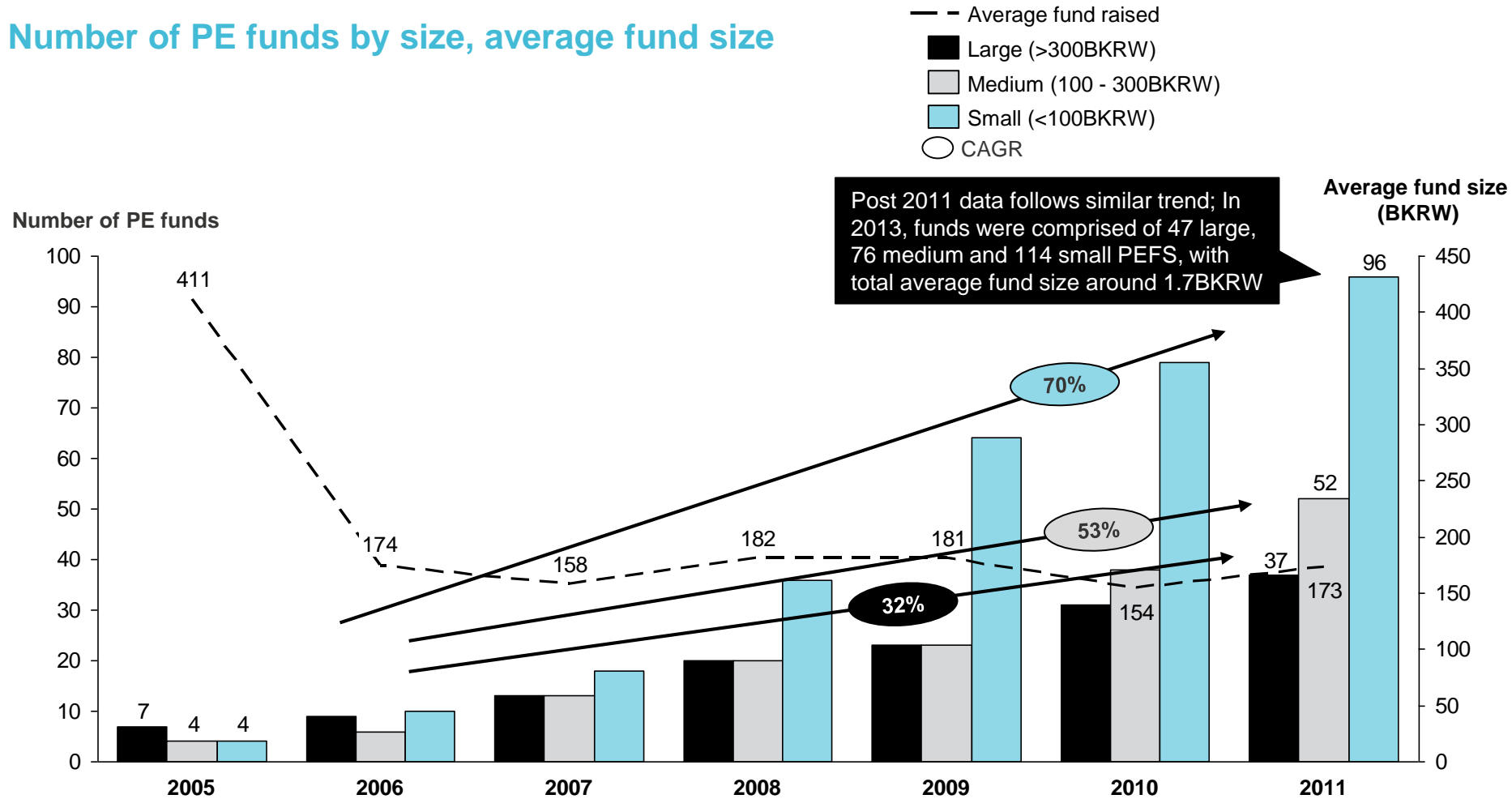
*1TKW is approximately 0.838USD using currency rate on 5/24/2016; **Financial Investment Services and Capital Markets Act (FSCMA);

***Figures adjusted based on modeling and Korean Capital Market Institute report

Source: Financial Supervisory Service, '15년 PEF 동향 및 시사점, 2016; Practical Law, Multi-jurisdictional Guide 2015/16

In particular small and medium funds have grown fast, creating a long tail of smaller players

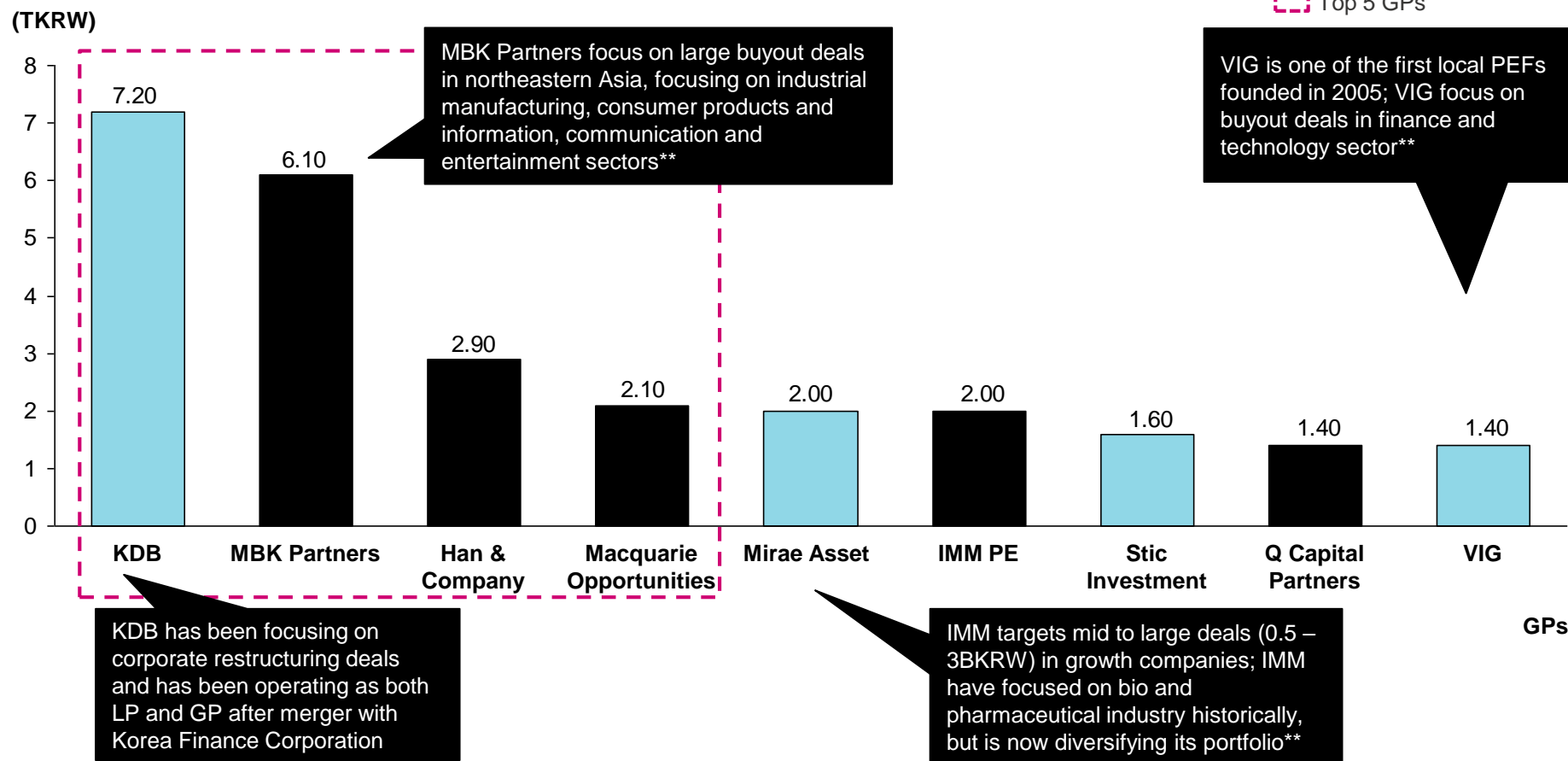
Number of PE funds by size, average fund size



Source: Financial Supervisory Service (2011)

Top 5 PE houses out of 162 GPs accounted for more than 30% of total 51.2TKRW committed funds

Top 9 PE houses by fund size (committed, as of end of August 2015)



Source: Jipyung, PEF의 이해 (2016)

Amendment to Capital Markets Act in 2015 introduced registration requirement for GPs' of PE firms

PE firm GP registration




Criteria	Registration requirement (249-15-1)
Capital	Equal or more than 100MKRW* capital as of most recent fiscal year end
Executive	Needs to be appropriate as per "law on financial company's governance structure"
Operating employees	Equal or more than 2 full time employees
Internal control system	Have appropriate internal control systems to estimate, evaluate and manage potential conflict of interest
Financial soundness	Need to meet financial requirements (only applicable to financial companies)
Social reliability	<ul style="list-style-type: none"> • No case of criminal violation of financial, monopoly and fair trade and tax related laws in past 3 years • Has not been identified as distressed financial institute or had business registration or license revoked

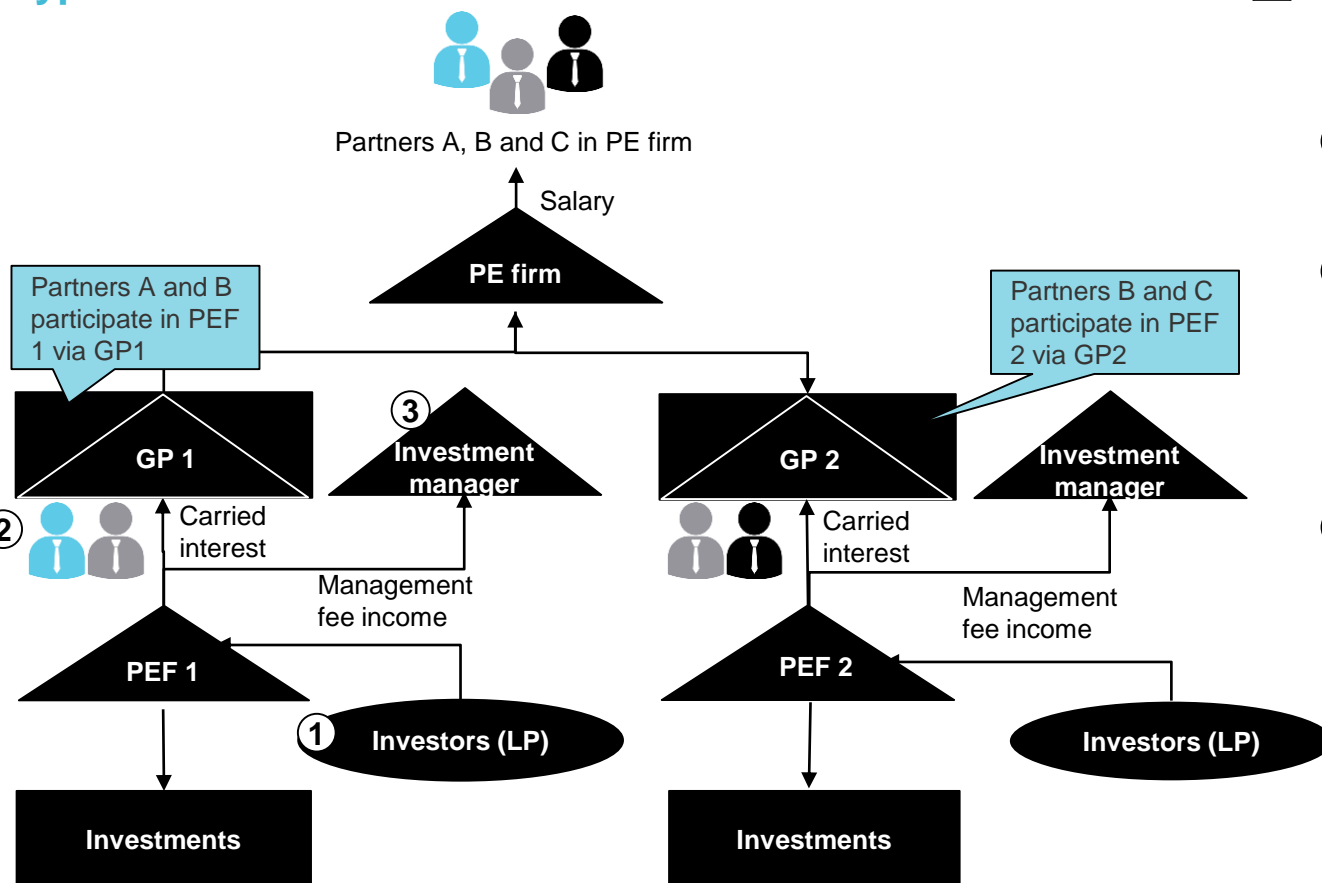
*100MKRW is approximately 100KUSD

Source: Financial Supervisory Service (www.fss.or.kr), *Registration manual for management participation type PEF GP* (2016)

PE firms in developed markets typically create a separate limited partnership or corporation to serve as GP for each fund they manage

Typical PE firm structure in the U.S.

 Corporation
  Separate Investors, Including individuals, US Corporations, foreign corporations, and non-profits
  Partnership

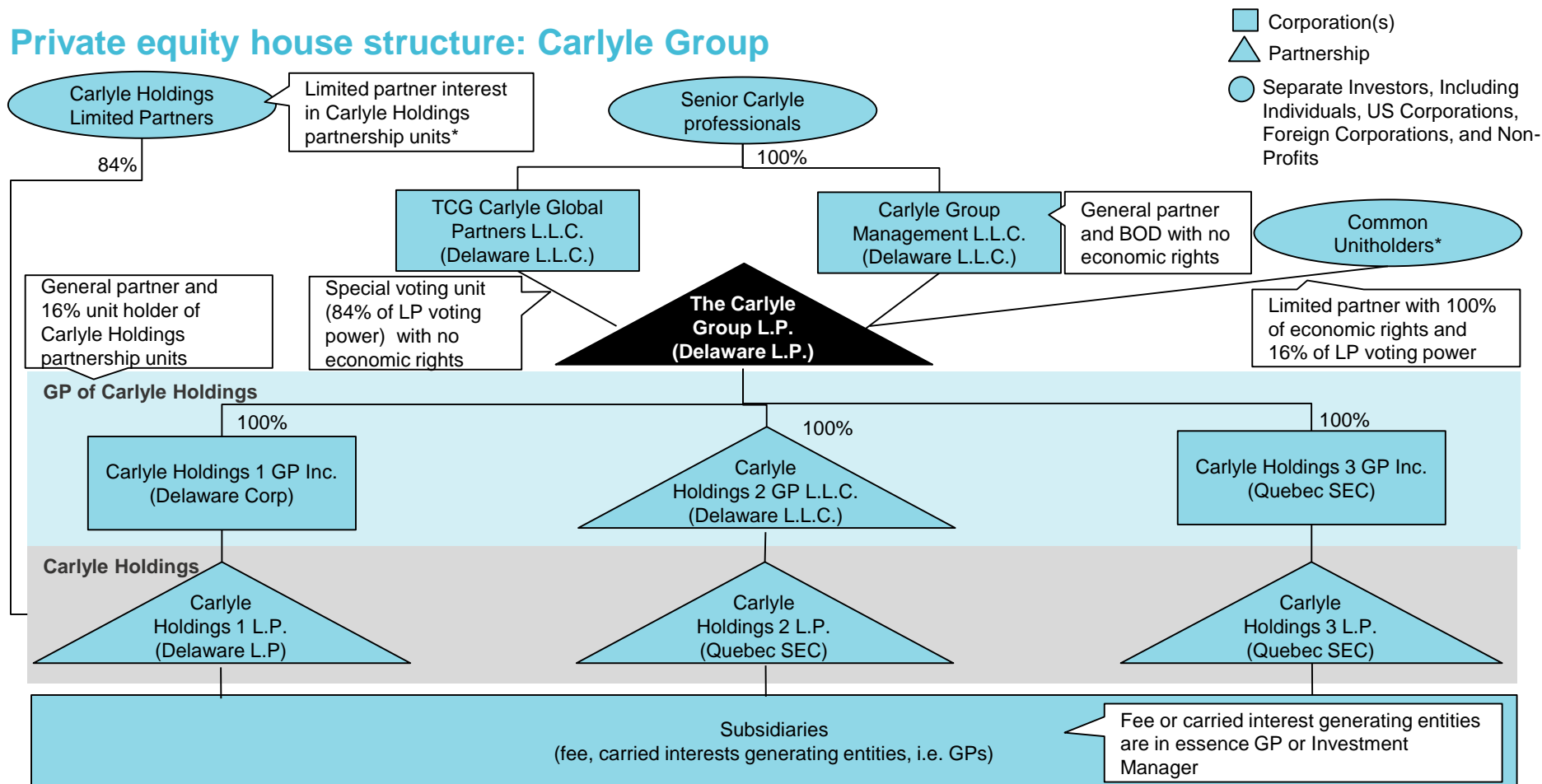


- ① Investors can receive capital gain treatment on their profits by using partnership structure for fund
- ② Executives are the carried interest holders, entitled to a share (typically 20%) of returns of fund after fund reaches certain return levels
 - By being partners of GP1, partners are able to receive capital gains tax rate on the carried interests
- ③ There can be separate entity to act as investment manager (investment management firm)
 - The investment management firm is usually related to (subsidiary of) PE firm
 - The general partner can be a partnership or corporation
 - Sometimes the GP and investment management firm are the same thing, with partners holding equity in the firm

Source: Duane Morris, *General structure for private equity funds; Feeder funds, parallel funds, AIVs and carry vehicles* (2014); Gilligan and Wright (2014)

Private equity firms use multiple layers of subsidiaries and set up separate paper companies to serve as GP for each fund

Private equity house structure: Carlyle Group

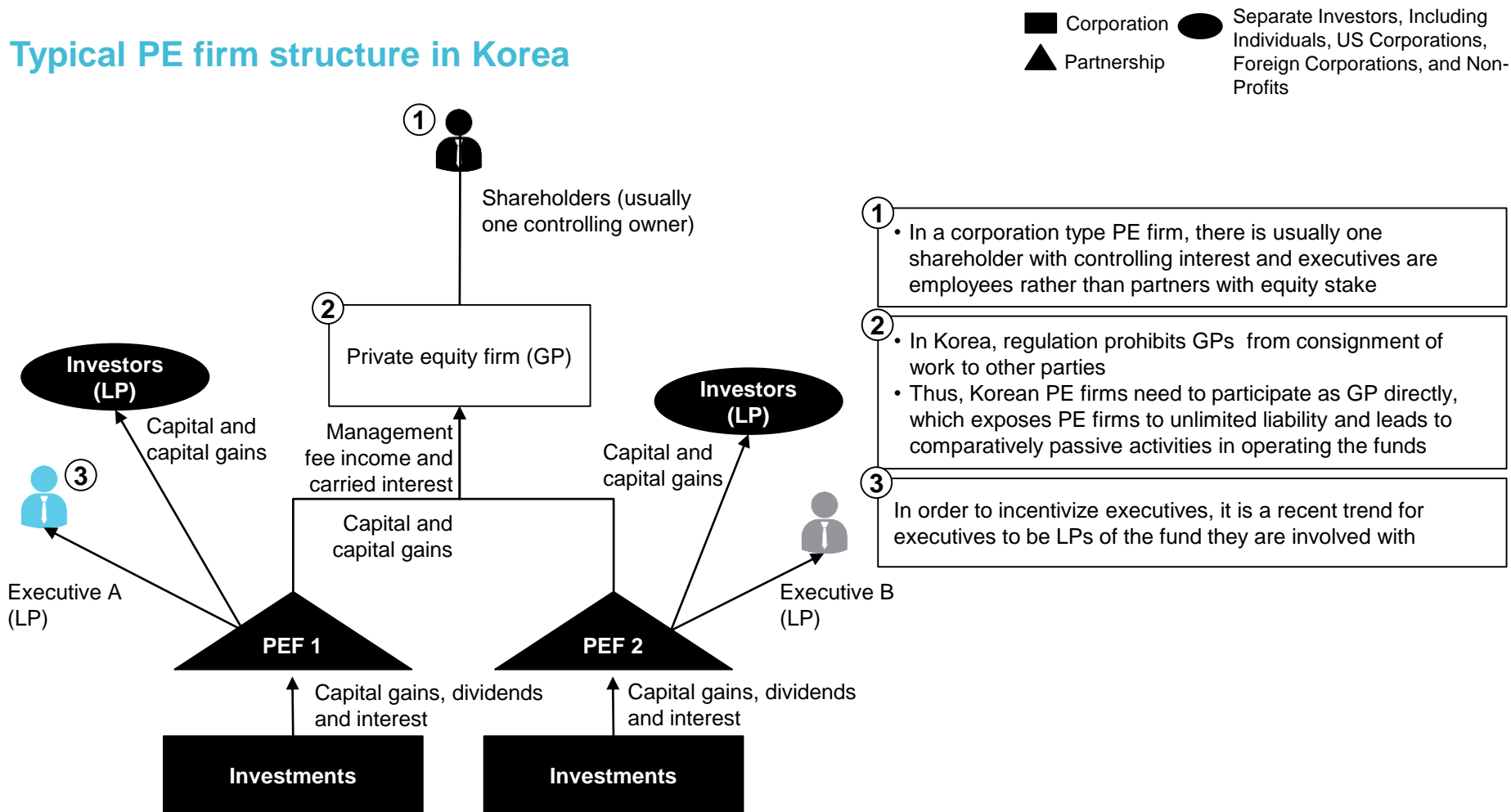


*Unit refers piece of ownership in limited partnership and gives stake in income generated by partnership company; common units are partnership units where units are publicly traded on NYSE (Class A) or owned by GPs (Class B)

Source: Carlyle Group 10-K SEC filing (FY2015)

Unlike U.S. or U.K., Korean PE firm itself must act as general partner of its fund directly, rather than through a separate entity

Typical PE firm structure in Korea



Source: Duane Morris, *General structure for private equity funds; Feeder funds, parallel funds, AIVs and carry vehicles* (2014); Gilligan and Wright (2014)

Korean legislation puts undue burden on local PE players compared to players in mature markets

Legislative challenges – comparison

Korean PEFs are in tax disadvantage compared to foreign PEFs operating in Korea as well as other countries

	U.S.	EU (UK)	Korea
Major regulations	<ul style="list-style-type: none"> Investment Advisers Act of 1949 section 203(b) exemption to registration requirement as adviser applies (if less than 15 funds in past 12 months) Investment Company Act of 1940 allowed exemption of registration to private funds to SEC if meeting minority investor and Title IV of Dodd-Frank Act of 2010 introduced registration and reporting requirement to private fund advisers with exemption option to advisers that advise solely VC funds, and private funds with AUM under 150MUSD and foreign private advisers 	<ul style="list-style-type: none"> Alternative Investment Fund Managers Directive (EU) Financial Services and Market Act of 2000 (UK) created FSA as a regulatory body for insurance, investment and backing 	<ul style="list-style-type: none"> Financial Investment Services and Capital market Act governs PEF and hedge funds Support for SME Establishment Act governs VC
Primary regulatory target	Large private funds	Large private funds	All funds
Objective	To manage systemic risk	To manage systemic risk	To encourage funds to fit policy intents
Restriction on fund type (VC, buyout or hedge)	No	No	Yes
Restriction on investment	No	No	Yes

Source: Korea Capital Market Institute (2016)

Korean law limits scope of investments and thus returns PE firms can make

Major types of private equity fund in Korea

Needs to make equity investment above 10% of voting shares of the target or show intention to participate in management via other means recognized by law

Previous classification

Updated classification

	General private fund (1998.9)	Hedge fund (2011.12)	PEF (2004.12)	Specialized investment type	Management participation type
GP qualification	Registered asset management	Registered asset management	No restriction	Registered as private collective investment adviser	Registered as GP
Fund registration	Prior to fund establishment	Post fund establishment	Prior to fund establishment	Post fund establishment	Post fund establishment
Investor	No restriction	<ul style="list-style-type: none"> Government, financial institutions, listed companies Individual with investment above 500MKRW 	<ul style="list-style-type: none"> Individual with investment above 1BKRW Corporation with investment above 2BKRW 	<ul style="list-style-type: none"> Government, financial institutions, listed companies Individual with investment above 500MKRW 	<ul style="list-style-type: none"> Government, financial institutions, listed companies Individual with investment above 500MKRW
Investment	Real estate	Yes (minimum holding period of general property 3 years and other 1 year)	Not allowed	Yes (minimum holding period of general property 2 years and no restriction for other)	Yes (minimum holding period of general property 2 years and no restriction for other)
	Equity investment (with no intention to control)	Yes	Not allowed (only up to 5% of capital allowed)	Yes	Yes
	Derivative investment	Yes	Not allowed	Yes	Yes
	Guarantee for debt	Not allowed	Up to 50%	Yes	Yes
Leverage	Only within 10% of total capital	Up to 400% of capital allowed	Within 10% of capital (up to 300% via SPC)**	Up to 400% of net capital	Within 10% of capital (up to 300% via SPC)***

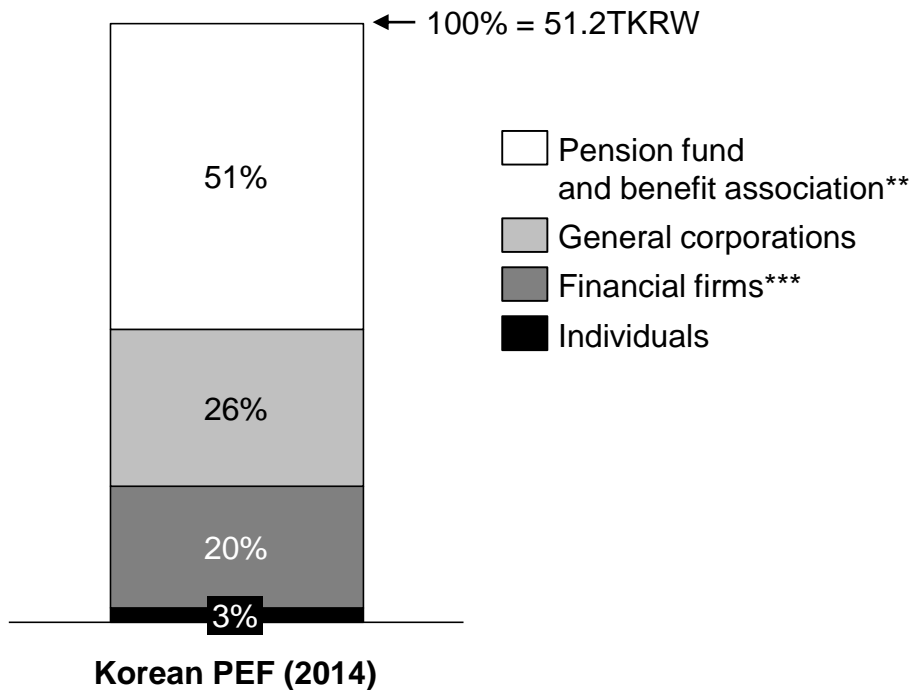
Source: Financial Supervisory Service (2015); KPMG Issue Monitor (2014)

*Only one layer of SPC was allowed prior to amendment in 2015

Government controlled/semi-government pension funds currently hold a large share of Korean private equity capital commitments

Korean PE source of funds

Korean* PEF committed capital by type of LPs



Remarks

- A majority of contribution to Korean PE funds comes from (semi-)government organizations such as pension funds and benefit associations influenced strongly by public sector officials (in addition, many SMEs also depend on government funding and support)
- As semi-government organizations are risk-averse in nature, some GPs in Korea may have difficulties in developing their investment portfolio optimally
- However, financial firms and general corporations typically lead the investment due to strategic imperative to explore new value creation opportunities
- The market is still young; there is further capital growth potential with contribution from wealthy individuals, universities and foundations*

*Research by Korea Capital Market institute found that average contributions for foreign PEFs were 32% pension funds, 16% individuals, 15% institutions, and 9% universities, foundations and other (2014)

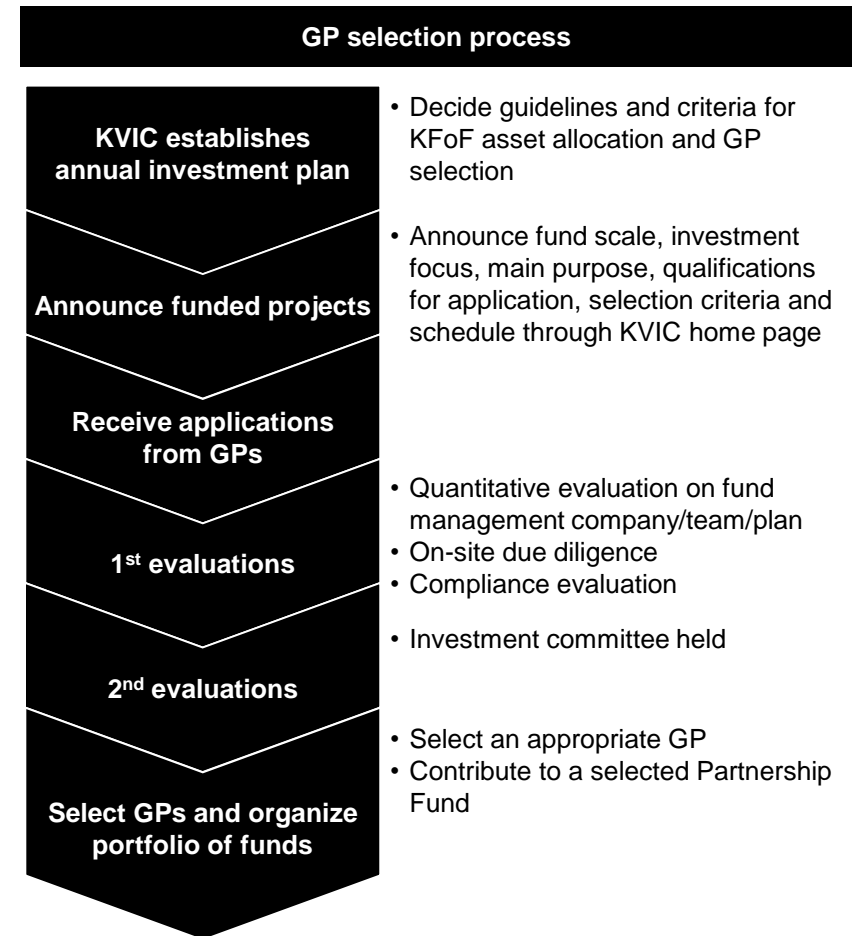
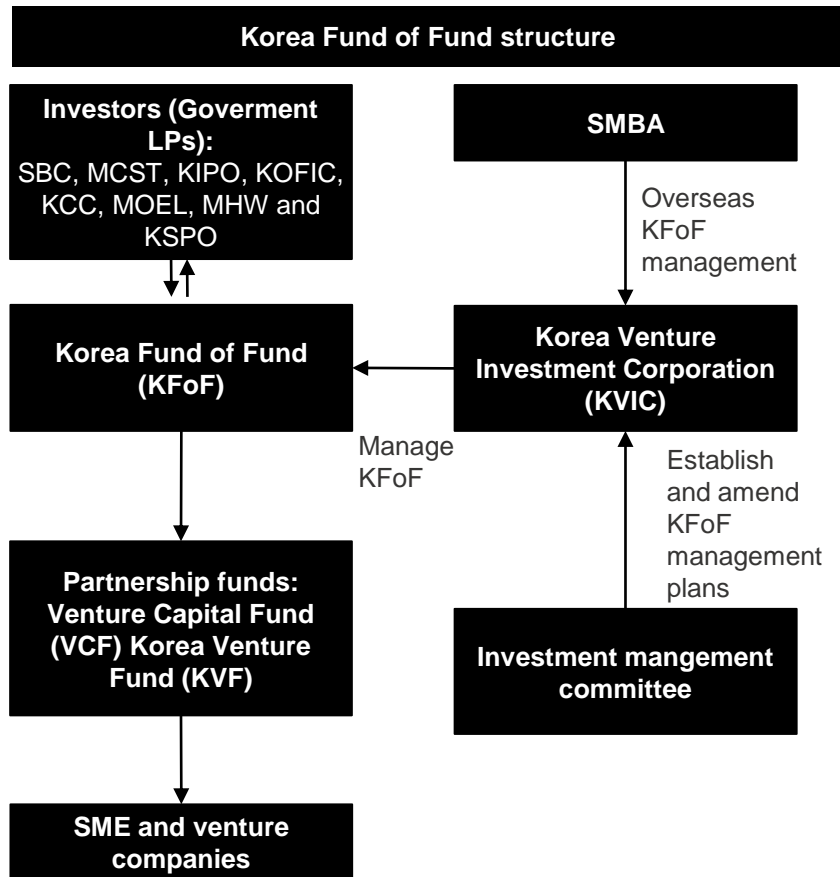
**National Pension, Teacher's Pension, Government Employees Pension, Korea Post Insurance, and Military Mutual Aid Association, Korean Teacher's Credit Union, Korean Finance Corporation, and others

***Financial firms refers to, but not limited to, commercial banks, insurance company, securities company, credit card company and savings bank

Source: Financial Supervisory Service, Preqin

Korean VC industry is driven by a government fund-of-fund as its major capital source

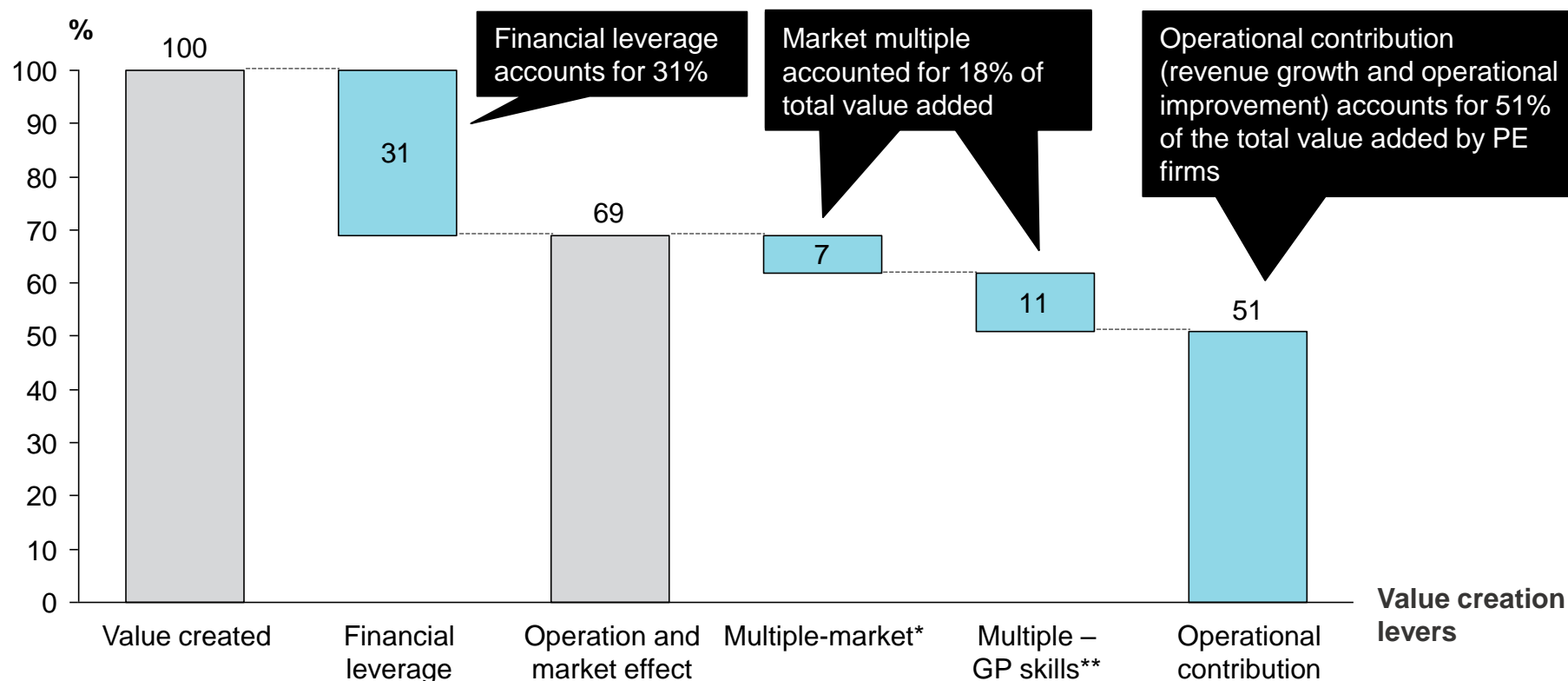
Role of Korea Fund of Fund in Korean VC



Source: Korea Venture Investment Corporation (www.k-vic.co.kr)

Leverage and operational contribution (revenue growth and operational efficiency) are primary value creation levers for global PE funds

Value creation in PE (realized buyout deals, worldwide)



*Multiple effect due to an uplift in public market valuation; ** Multiple effect due to deal-specific multiple expansion, attributable to GP multiple expansion skills linked with qualitative operational improvements

Source: Analysis of 701 exits completed between 1990-2013 in North America, Europe and Asia-Pacific, Value Creation in Private Equity, Capital Dynamics and the Technische Universität München (June 2014)

There are several bottlenecks that need to be overcome to leverage the full value creation potential of Korean PE

Key issues in Korean PE market

Fragmented capital allocation

- Due to short history, majority of local GPs lack concrete track record and reference cases, which may have limited their ability to raise anything more than fairly small project funds
- Majority of contribution to Korean PEs comes from semi-government organizations such as pension services and benefit associations which are risk averse by nature and may be reluctant to allocate large investment amounts to a single fund
- PE firms with small project funds may have difficulties in allocating enough capital to an individual deal to gain control

Lack of attractive targets with growth potential

- Many SMEs are suffering from low profitability and growth due to being “captured” by domestic markets and customers (often large conglomerates with large purchasing power)
- Cultural tendency to not differentiate clearly between ownership and management; control held in the hands of few individuals, in some cases with limited capabilities to lead company to international growth (this, together with highly compartmentalized management culture also makes it difficult for PE firms to make organizational changes for improved revenue and operational efficiency)
- Some early attempts at creating value through taking operative control were not very successful, some PE firms lack staff members with in-depth operative experience (including global expansion)

Limited exit paths

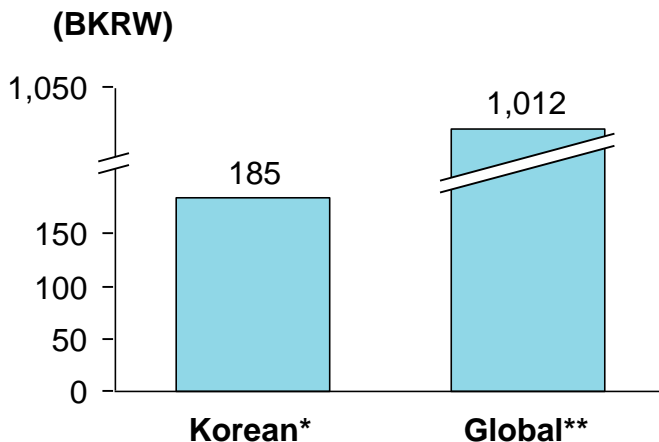
- Domestic M&A market (which has played a key role) getting more challenging due to economic situation
- There are only a limited number of domestic buyers with enough capital to purchase portfolio companies through trade sale (especially larger deals)
- Secondary market is starting to develop recently but still is not as active as it is in mature markets
- Albeit this is changing, there is still some negative public sentiment when Korean companies are sold off to foreign entities; an addition, acquiring Korean companies can be difficult for foreign companies lacking the language skills and cultural insight

Source: Korea Development Institute Journal of Economic Policy (2016); Interview with market experts

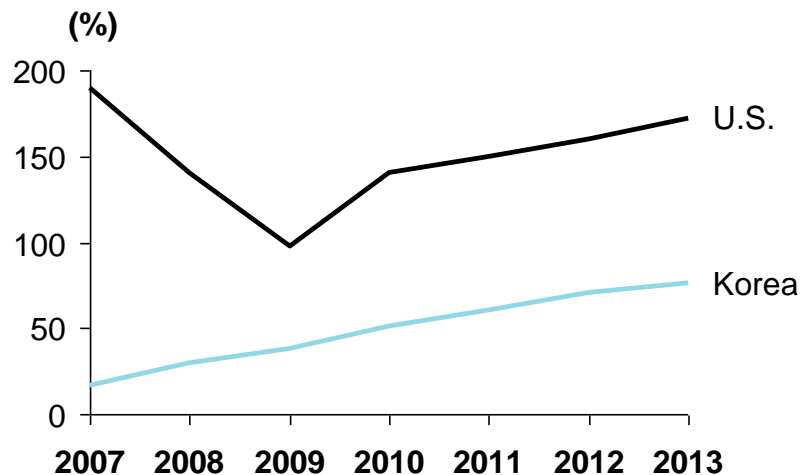
Small fund size coupled with fairly low leverage affect investment strategies, with some players doing mainly minority share investments

Fund size and leverage comparison

Average committed capital per PE fund (2015)



PE fund investment leverage***



In Korea, up to 300% leverage is allowed for PEs through use of SPC (special purpose company)

- With an exception of a few funds by leading GPs, many PE funds are small-sized project funds, where LPs have a visibility in investment targets prior to committing capital (and can put strict requirements on which deals are made)
- Small fund size and restrictions on leverage may drive investment strategies to minority share investments, which does not give GPs sufficient control (there are also regulatory and cultural factors affecting this)

"There is a cultural tendency not to differentiate between ownership and management."

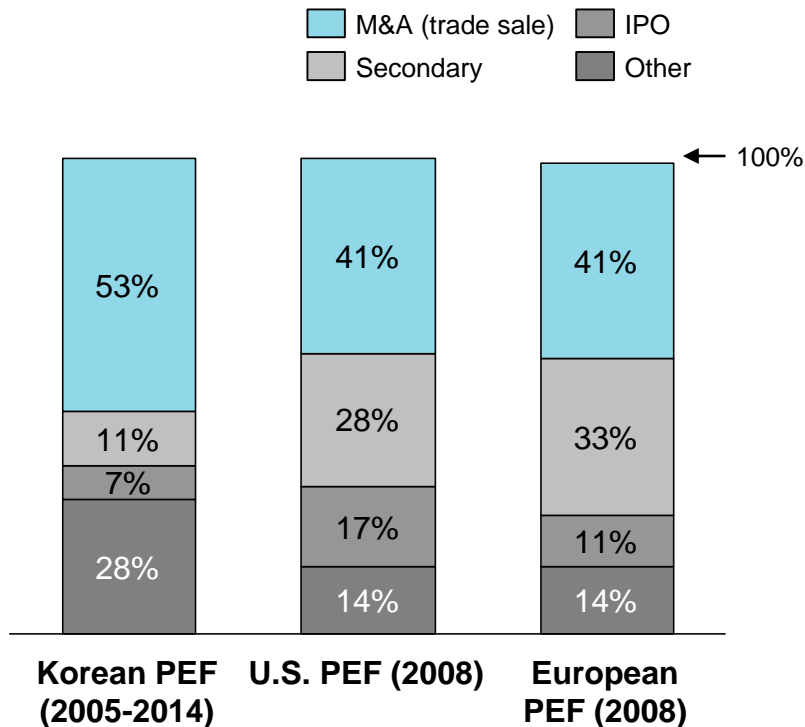
"Most well-performing SMEs have strong owner-dependency; their performance drops if owner leaves."

*FSS (2016); **Bain & Company, "Global Private Equity Report 2016"; ***Approximate figures based on Korea Capital market Institute report (2015)

M&A has accounted for primary exit strategy for Korean PE funds, but the economic downturn is putting brakes on this path

Exit strategies overview

PEF exit strategies (share of aggregate exit value)



Remarks

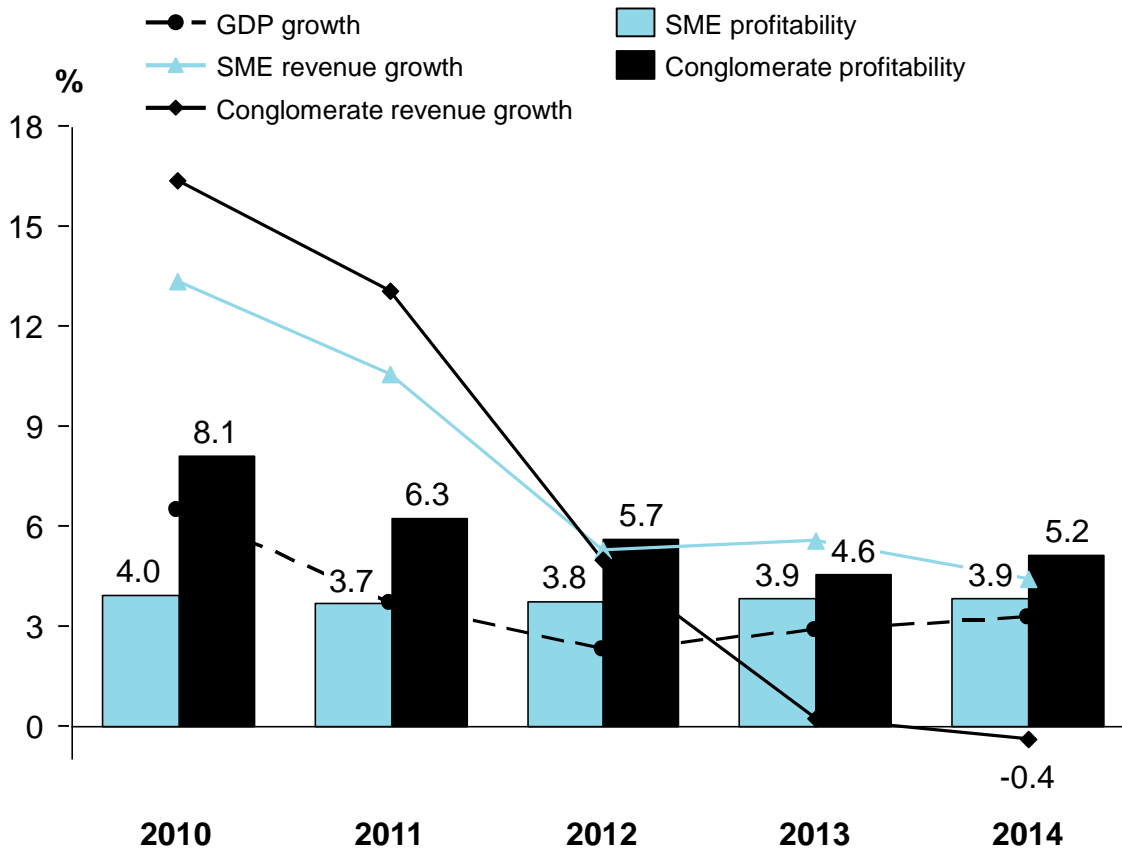
- M&A market has been driven by largely by Korean conglomerates buying up targets
- IPO of companies with PE fund as largest shareholder has been limited by KRX (main exchange)
- Secondary market is still in an early stage compared to matured markets
- Leveraged recapitalization has been increasing as a partial exit method due to difficulties to find a proper exit

Leveraged recapitalization substitutes some of the company's equity with additional debt, usually done by the company raising money by borrowing from a bank or issuing bonds, which amount is then used to repurchase the company's own shares from the investor

Source: Korea Capital Market Institute (2016); The Global Economic Impact of PE Report (2008)

Korean conglomerates are seeing lower growth and profit; this will trickle down the value chain to the SMEs supplying them

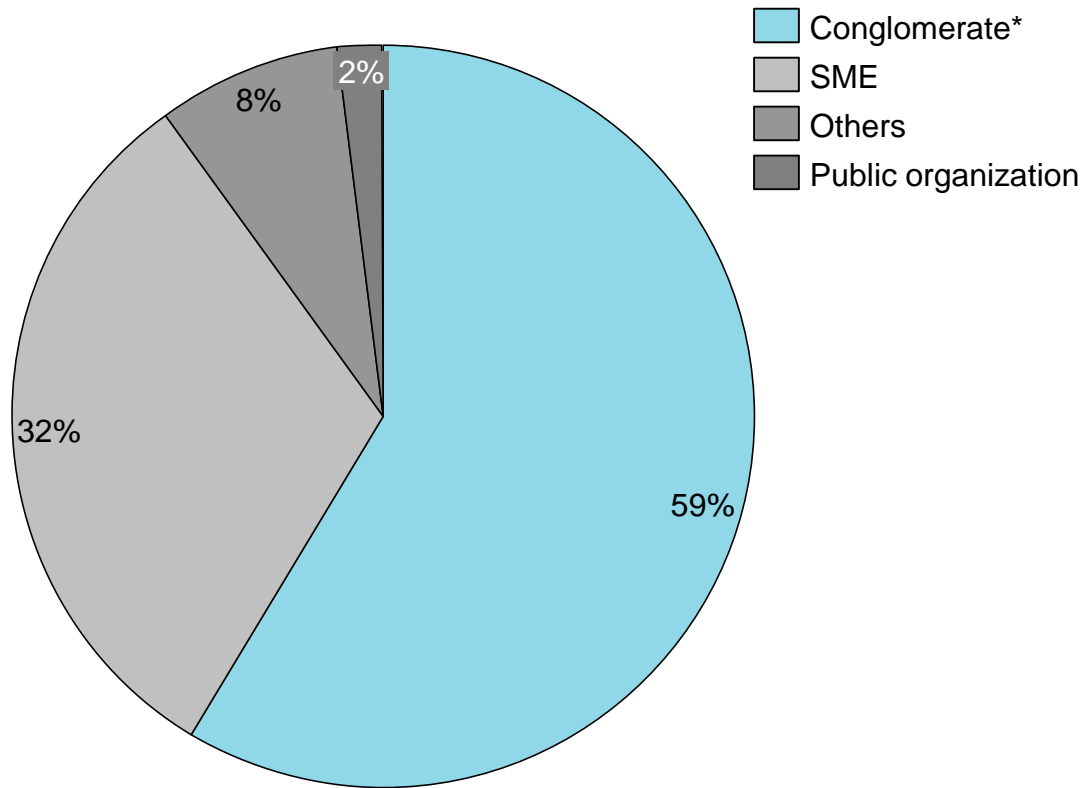
Growth and profitability of Korean SMEs and conglomerates compared to GDP



*Source: World Bank

SMEs in Korea are highly dependent on domestic conglomerates

Korean SMEs' (domestic) customer breakdown



Remarks

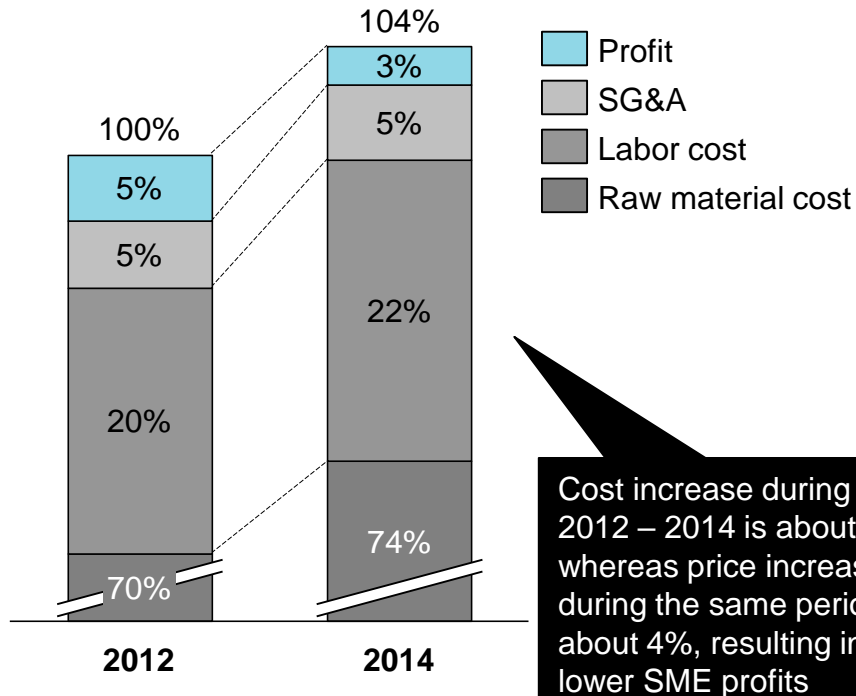
- Diversification of the customer base is key to successfully move to a virtuous cycle for SMEs, but often SMEs feel a sense of loyalty to the local conglomerates and do not actively pursue other customers
- Although a cultural barrier exists, the attitudes are changing; some conglomerates view positively an SME that can sell its products also to Western competitors (in the hopes that this would develop their offering further, and thus in turn help the Korean conglomerate)

*Including conglomerates and mid-to-large sized firms
Source: Kbiz Korea Federation of SME report, 2014

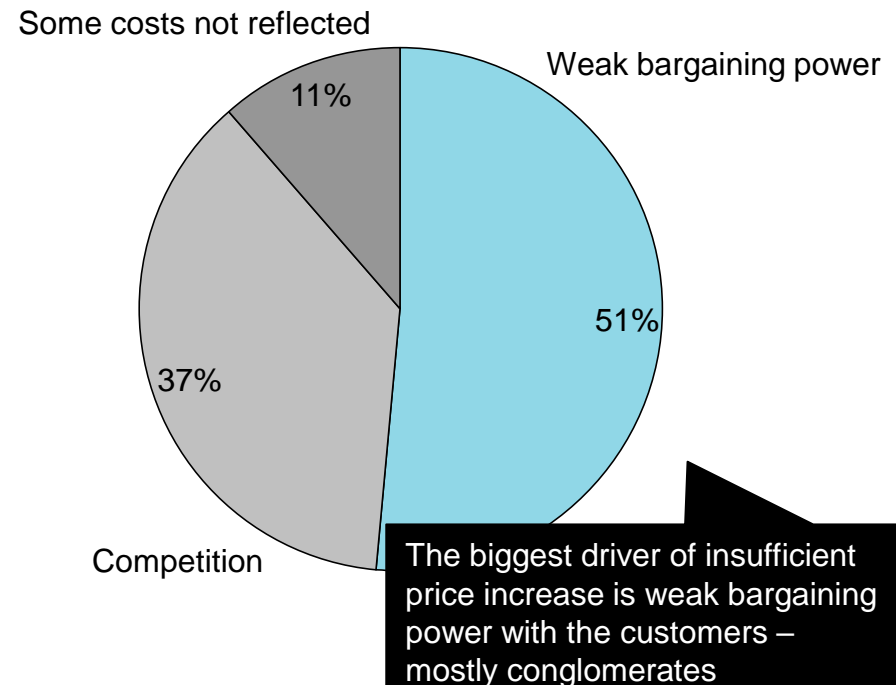
Dependence on (local) conglomerates drives weak bargaining power of SMEs

Korean SME bargaining power

SMEs cost and final price change (2012 – 2014)*



Reasons for weak end price**



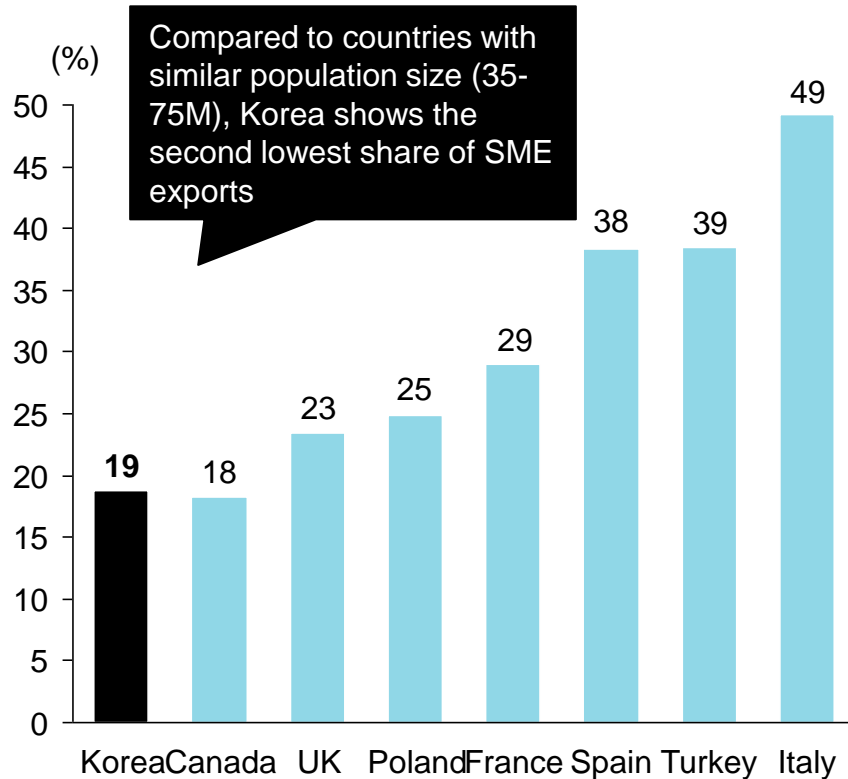
*Proportion of cost items are arbitrarily set for better understanding **Weak bargaining power includes 'customer refused to increase price', 'only partial increase agreed', 'price reduced uniformly without proper reason'

Source: Kbiz Korea Federation of SME report, 2014

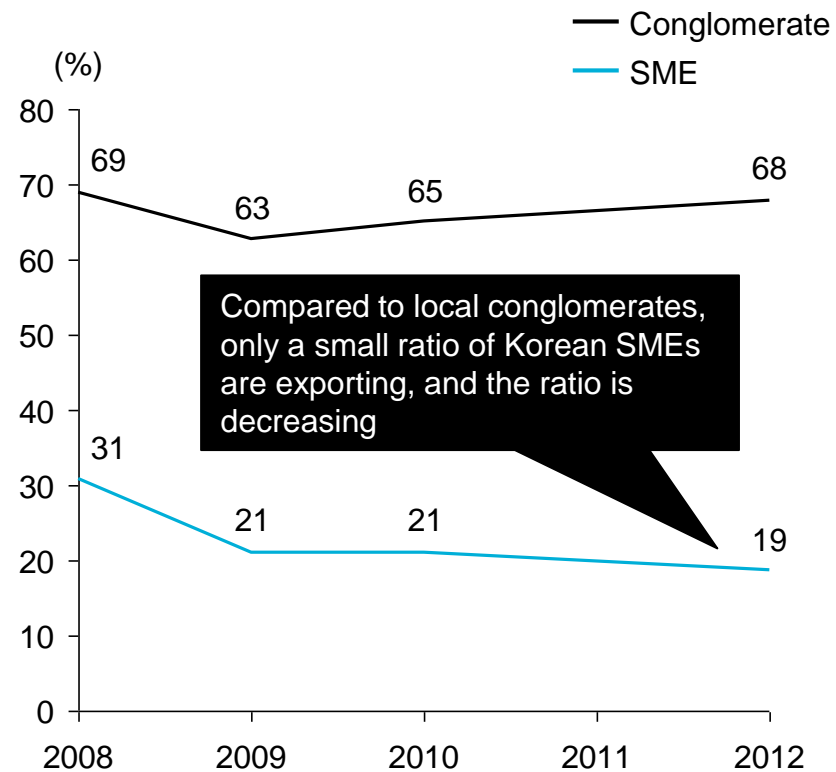
On an overall level Korean SMEs do not seem to actively drive global expansion

SMEs contribution to export

SME export share of total exports per country (2012)



Export by Korean SMEs vs. conglomerates, share of total exports (2008 – 2012)

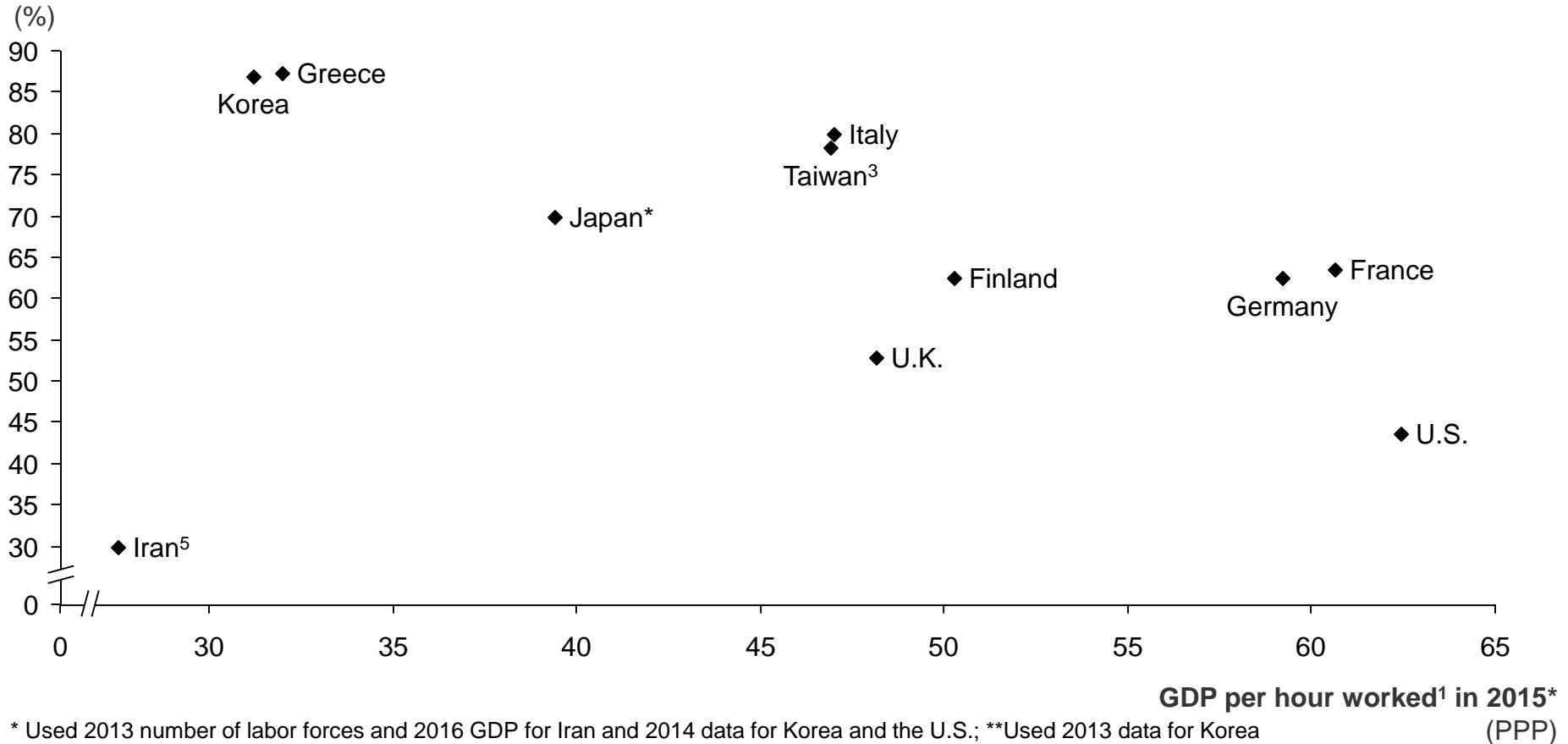


Source: Entrepreneurship at a Glance 2015, OECD, 2015; SMBA

The hidden issue of Korean economy is that the SME sector is extremely inefficient yet it employs a large share of the population

SMEs contribution to overall economy by country

SMEs share of total employment² in 2012**

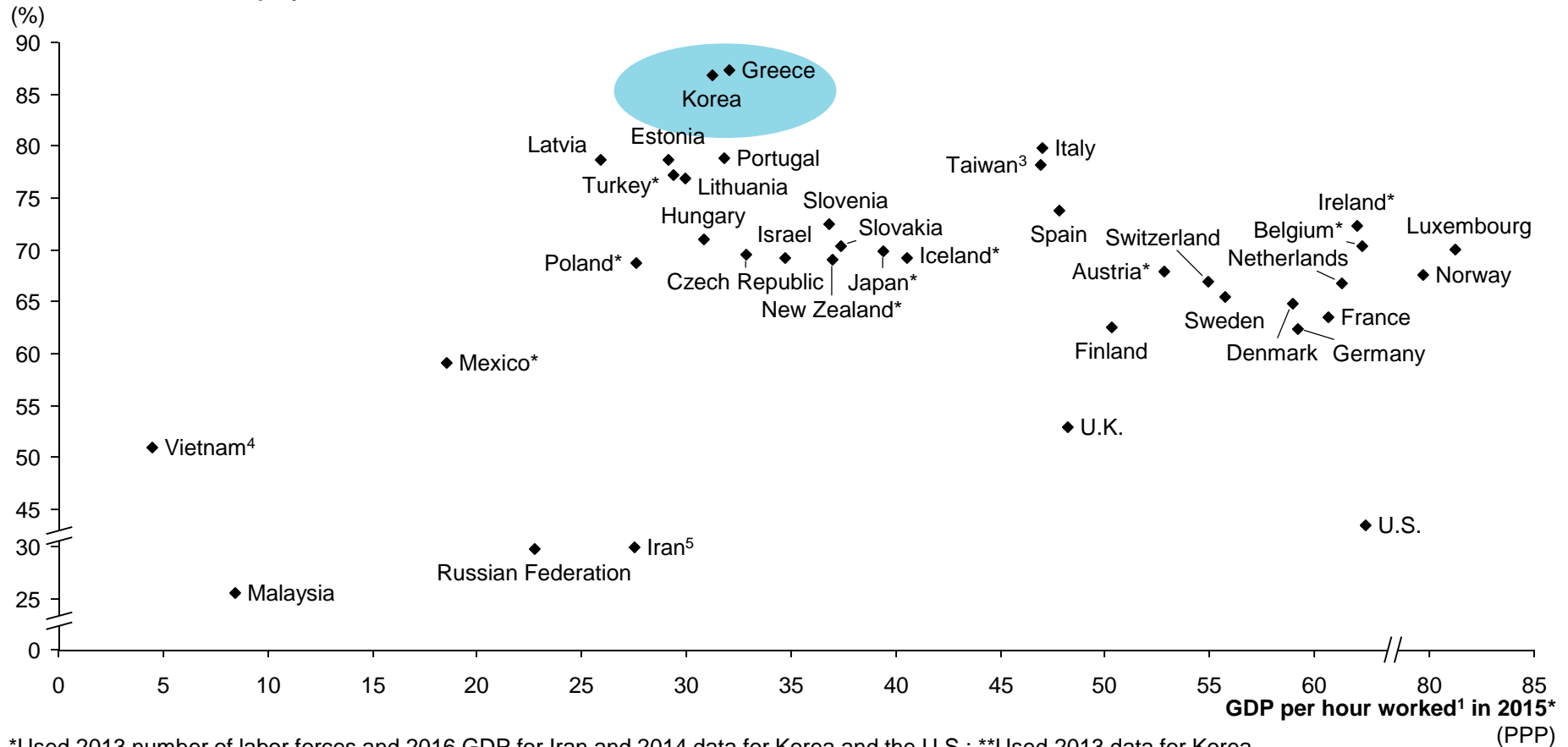


* Used 2013 number of labor forces and 2016 GDP for Iran and 2014 data for Korea and the U.S.; **Used 2013 data for Korea
Source: ¹OECD, *Compendium of Productivity Indicators* (2016); ²OECD, *Entrepreneurship at a Glance* (2015); ³Ministry of economic affairs of the R.O.C and The conference board total economy database; ⁴General Statistics Office of Vietnam; ⁵ Statistical Center of Iran (www.amar.org.ir)

Even in global terms, Korean SMEs poor productivity and role in employment stands out

SMEs contribution to overall economy by country (full list of countries)

SMEs share of total employment² in 2012**

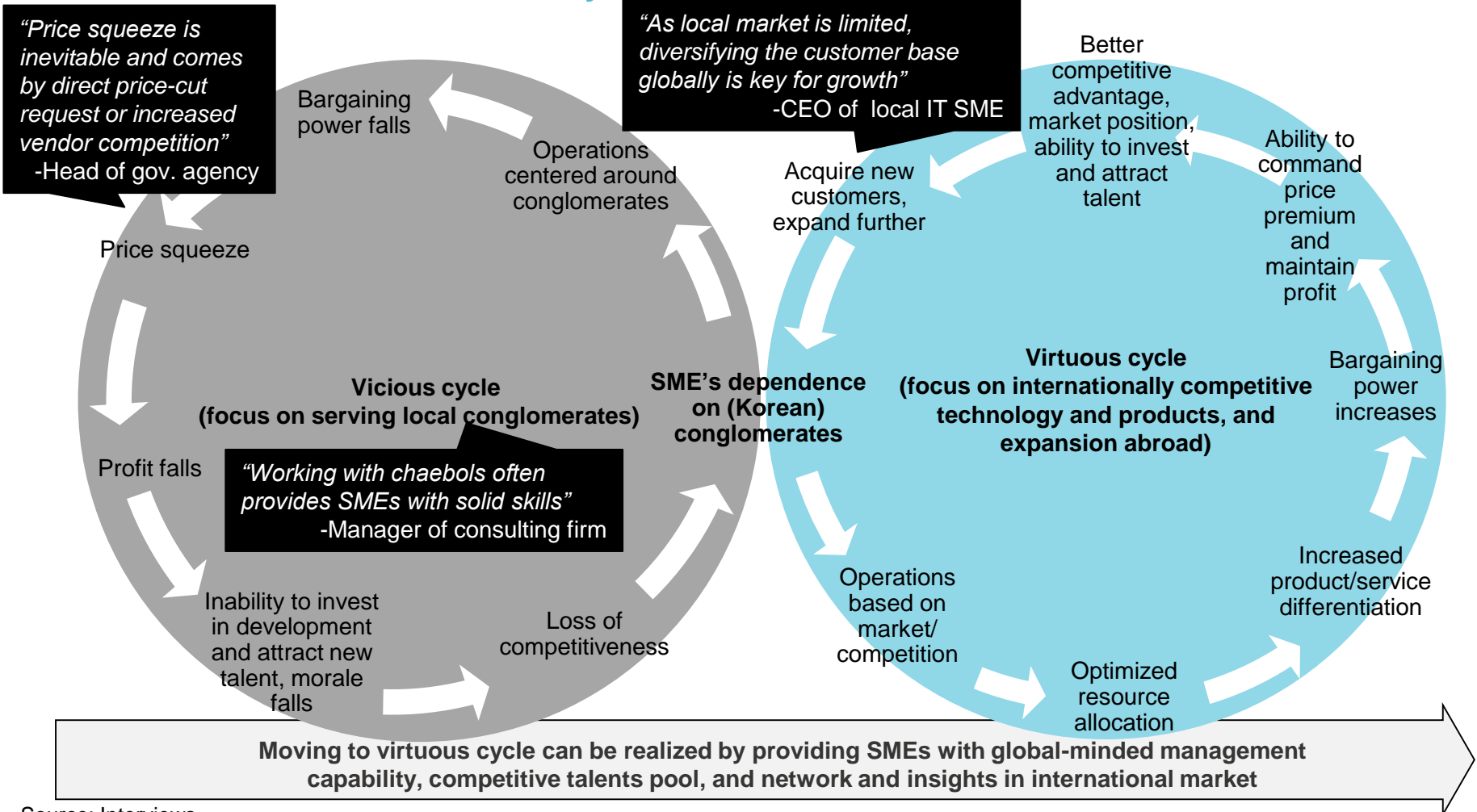


*Used 2013 number of labor forces and 2016 GDP for Iran and 2014 data for Korea and the U.S.; **Used 2013 data for Korea

Source: ¹OECD, *Compendium of Productivity Indicators* (2016); ²OECD, *Entrepreneurship at a Glance* (2015); ³Ministry of economic affairs of the R.O.C and The conference board total economy database; ⁴General Statistics Office of Vietnam; ⁵ Statistical Center of Iran (www.amar.org.ir)

High dependence on local conglomerates can trap SMEs into vicious cycle, but this can be broken by customer diversification

Korean SME vicious vs. virtuous cycle



Source: Interviews

REDDAL

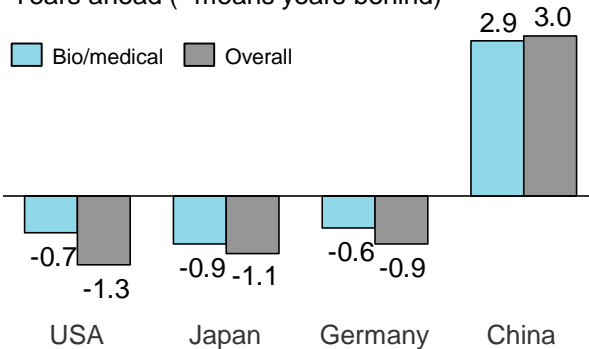
Bio-/medical technology, AR/VR and digital media are some of the sectors where strong Korean SMEs can emerge

Potential emerging technology sectors

Bio/medical technology

Korean SMEs' technology gap compared to other countries

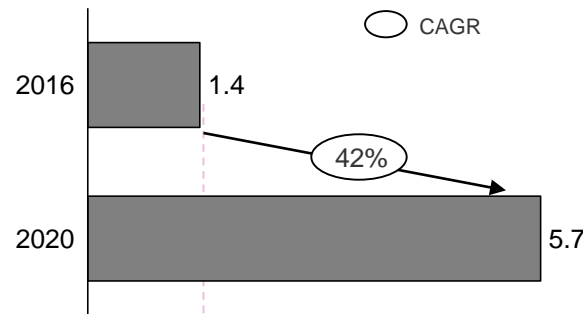
Years ahead (- means years behind)



- The bio-/medical technologies of Korean SMEs have the least technology gap compared to most developed countries
- About 22% of Korean bio-/medical SMEs believe their technologies outrun US tech.
- Most developed technological abilities in Korea are manufacturing, operations and maintenance, reaching about 79% vs. world top class

AR/VR

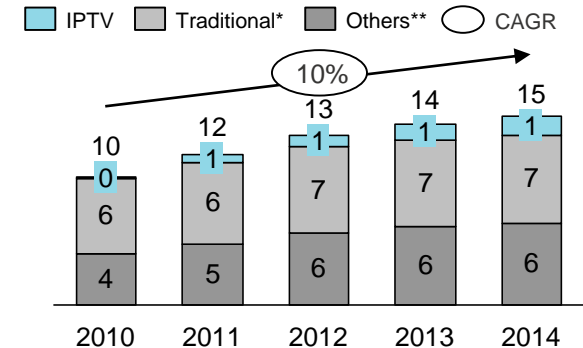
Korean VR market size estimates TKRW



- Revenue from sales of devices as well as contents is expected to grow to 5.7TKRW by 2020
- Korean companies have both H/W (Samsung's Gear VR) and S/W (plenty of game developers) competency
- This year, Korean government vowed to invest 41BKRW in the VR industry through 2016, totalling 185BKRW by 2018

Digital media

Revenue of Korean TV broadcast by type TKRW



- The market size continues growing
- Opportunity to diversified offering and revenue model
- Also, new trend around transmedia is emerging; Korea is well positioned utilizing widespread mobile and broadband adoption, broad application base and high media consumption rate of Korea

*Traditional includes satellite, cable, ground wave TV broadcast. **Others include home shopping and diverse composition channels

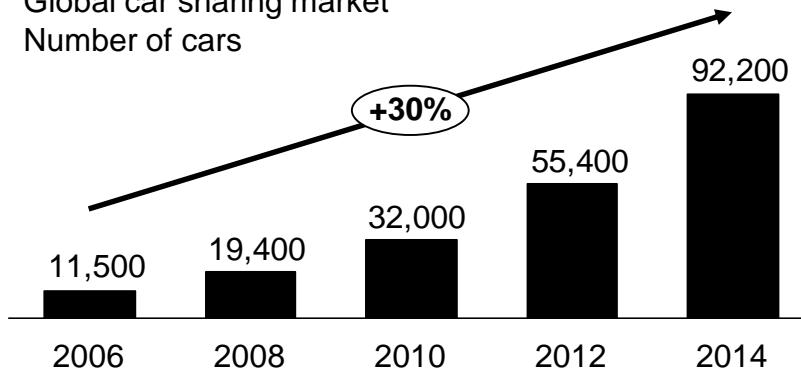
Source: 2015 SME Technology Report SMBA; Korean Virtual Reality Industry Association; Korean broadcasting market competitive status report, 2015, KCC

Benchmarking Japanese market, businesses promoting sharing economy may present attractive investment opportunities in Korea

Potential attractive SME sectors

Car sharing

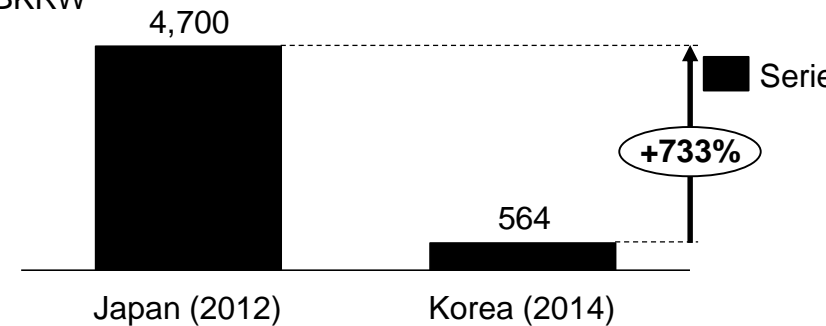
Global car sharing market
Number of cars



- Car sharing market is growing fast globally
- Japanese market has shown even more rapid growth at 100% CAGR during 2002-2016

Second hand trading

Market size in revenue
BKRW



- Korean second hand trading market is still at initial stage with relatively small revenue
- Second hand trading market in Japan has grown at 12% CAGR during 1997-2012

Korea may see similar growth as Japan in sharing industries as both countries experience similar social and economic trends (including long-term recession/low employment rate, increased polarization, deregulation, and increasing environmental concerns)

Source: Investor market report by leading financial institution

There are also other special segments that have shown strong growth in Japanese market which could expand in Korea

Potential growth sectors in Korea based on evolution in Japan

Industry	Growth rate in Japan	Korean market size estimate	Growth driver	Key players (Korea)
Nutrition supplement	6%	1.5TKRW (2014)	<ul style="list-style-type: none"> • Aging population • Interest growth for health/diet 	<ul style="list-style-type: none"> • KT&G • Natural EndoTech
Funeral prepayment	4%	3.7TKRW (2015)	<ul style="list-style-type: none"> • Low birth rate/super aging society • Growth of death rate 	<ul style="list-style-type: none"> • PreedLife • Boram Sangjo
Car tuning	12%	500BKRW (2013)	<ul style="list-style-type: none"> • Deregulation • Car market mature 	<ul style="list-style-type: none"> • Tuix • Tuon
Frozen food	5%	1.6TKRW (2014)	<ul style="list-style-type: none"> • 1-2 persons' family • Aged family • Convenience/storage 	<ul style="list-style-type: none"> • CJ Cheil Jedang • Dongwon F&B • Haetai food
DIY	7%	80BKRW (2010)	<ul style="list-style-type: none"> • Baby boomer retirement • Increased leisure time • Permanent low growth of economy 	<ul style="list-style-type: none"> • KCC • Hanhwa L&C • Hansaem
Pet care	4%	1.8TKRW (2015)	<ul style="list-style-type: none"> • Baby boomer retirement • Urbanization/nuclear family increase • "Pet as a family member" concept 	<ul style="list-style-type: none"> • Daehan pet food • Daeju • Cheonhajaieil pet food
Parking lot management	8%	1.1TKRW (2015)	<ul style="list-style-type: none"> • Increased charge parking areas • Strict regulation/fee 	<ul style="list-style-type: none"> • Hi Inno Service • GS Park 24

Source: Investor market report by leading financial institution

Agenda

Iran is entering a new phase, where private equity can help drive growth especially in the SME and technology startup sectors

Finland, South Korea, Malaysia and Vietnam have all gone – or are going – through a similar process and represent different stages of maturity

Finland has built its private equity ecosystem step by step, but some gaps still remain

Korean private equity is expanding rapidly, but is polarized and suffers from unclear and ever changing regulation

Malaysian private equity is still early on, but can play a key role in building up SME capabilities, and has a strong SWF element

Taiwanese private equity faces both challenges and opportunities, but seems to be in a political gridlock

In Vietnam foreign capital is starting the private equity sector, but the legislative framework is still missing

Iran can benefit from the experiences of these countries, but must also address fundamental issues in its economy

PE is still in an early stage in Malaysia, although it is gaining popularity among investors and companies

Overview of PE sector in Malaysia

Current PE landscape still young in Malaysia

- The private equity industry in Malaysia is still at a nascent stage; however, the government expects this sector to become more prominent and crucial as the country adapts to new realities in the market
- Foreign investors are still leery of funnelling capital into Malaysia as risk is perceived to be too high; deals are expected to come largely from domestic institutional investors and Malaysian government-owned private equity company, as long as the political uncertainty remains

Many government initiatives to develop the PE/ VC landscape

- The Malaysian Government wants to build a new economic model that is more dependent on innovation and productivity; it actively encourages the development of Private Equity (PE) and Venture Capital (VC), aiming it to become the next engine of economic growth that will take Malaysia into the ranks of high income nations
- The Securities Commissions' (SC) regulatory framework, has been tailored to allow progressive development taking into consideration the distinct needs and nuances of Malaysia's VC/PE landscape; where appropriate, the SC has liberalised certain requirements to accord greater flexibility and better accommodate VC/PE activities
- At present, most of these initiatives are focused on attracting companies in certain growth sectors such as information and communication, multimedia and bio-technology and renewable energy

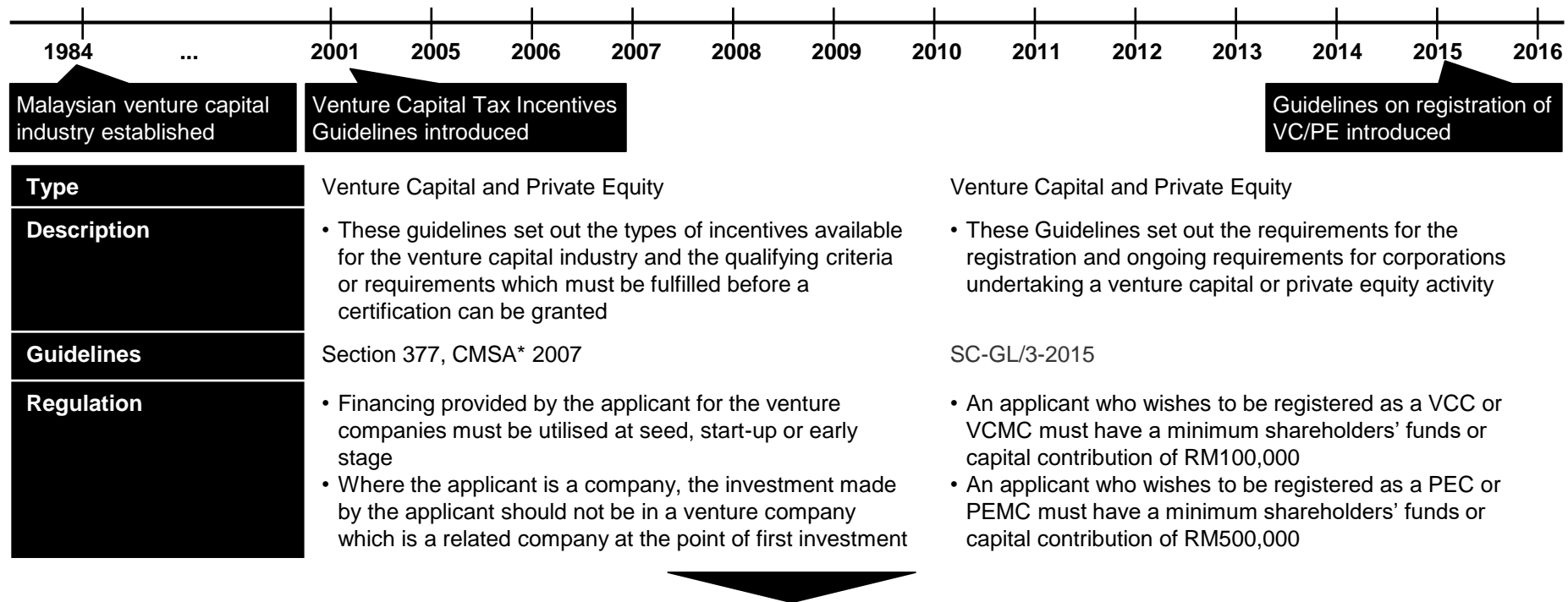
Future outlook of the PE landscape in Malaysia is positive

- Deal outlook for the next 2 – 3 years vs 2015 is likely to improve, with GP networks building up, and South East Asia being a more attractive alternative to China
- Malaysia currently ranks 11th out of 125 countries assessed in the Venture Capital & Private Equity Country Attractiveness Index, garnering international recognition which reflects the growth prospects of Malaysia's VC/PE sector

Source: "About Private Equity in Malaysia", Ekuinas; "Asian private equity deals lowest since 2004", Nikkei Asian Review; "The Impetus for Growth and Innovation" Securities Commission Malaysia; "Asia-Pacific Private Equity Report 2016", Bain & Company, Inc

Private equity funds in Malaysia are presently lightly regulated, with taxation laws governing its structure

Malaysian PE industry history and key milestones



Implication of a lightly regulated regulatory oversight

A rise in the risk of fraud, insider trading, market manipulation and conflicts of interest. The adequacy of risk management procedures and asset valuation mechanisms has also been called into question.

*Capital Markets and Services Act

Source: Securities Commission Malaysia

Malaysia's regulatory framework is at a nascent stage, with a lightly regulated PE and hedge fund ecosystem

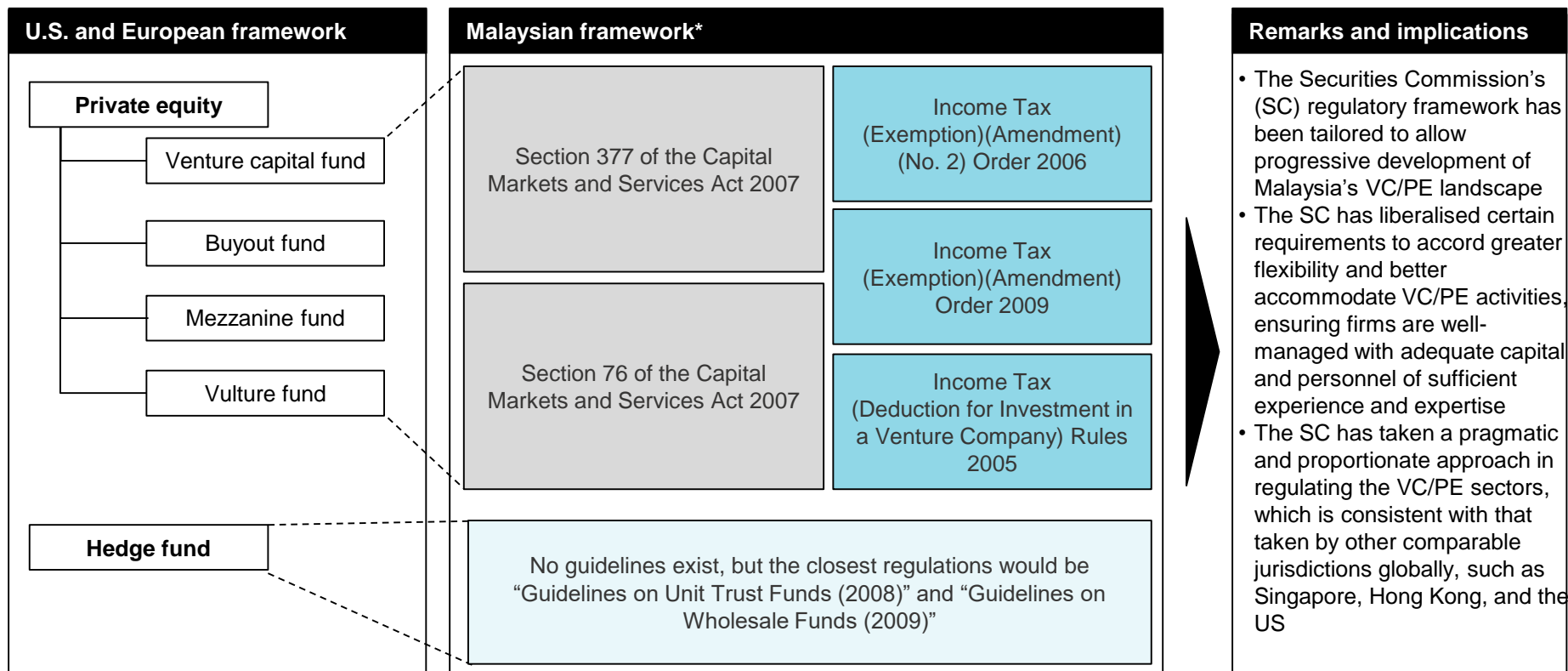
Regulatory framework in Malaysia



Venture Capital Tax Incentive
Guidelines



Guidelines on the Registration of
Venture Capital and Private Equity
Corporations and Management
Corporations

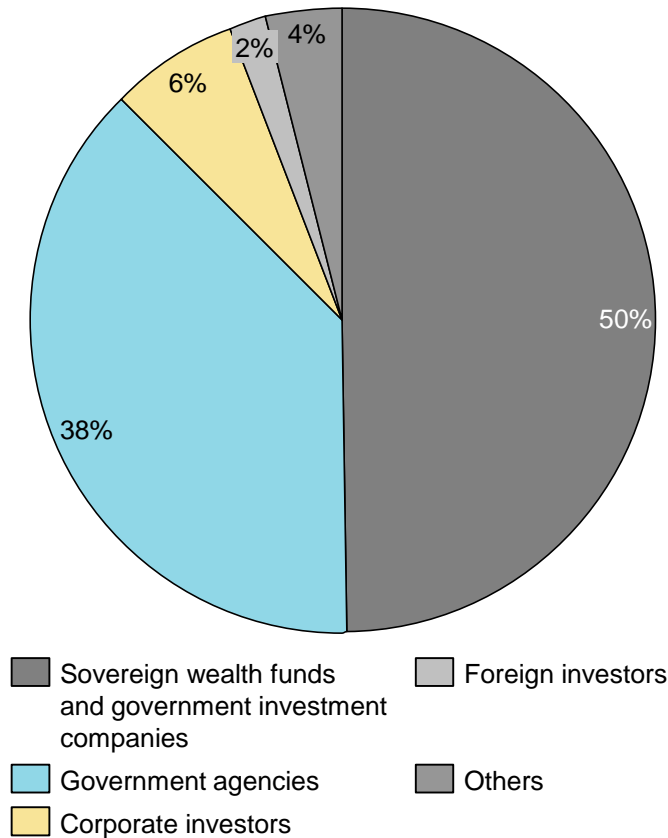


Source: Securities Commission Malaysia

*Verbally confirmed over a phone call with Securities Commission Malaysia

Sovereign wealth funds and government investment companies contribute to 50% of PE investment flows in Malaysia for the year 2015

PE by source of funds in Malaysia



Remarks

- The government, which aims to reduce the domestic economy's dependence on state-owned companies, is encouraging private-equity financing to help small businesses expand, and the country's largest state-run pension fund is leading the way by allocating more funds to private-equity investments
- In the recent 2017 Budget Announcement, the Malaysian government allocated 3BMYR from government investment companies to provide financing to potential companies, which in turn will boost trading activities of the SMEs and help rejuvenate liquidity and sentiment on the local bourse.

Source: SME Annual Report 2015/16, SME Corp Malaysia; "Malaysia Attempts to Spur Private Equity", Wall Street Journal; 2017 Budget, Ministry of Finance Malaysia

Intrinsically Malaysia should be a competitive investment target for private equity

Malaysia against peers' attractiveness for PE and VC

Rank		Economic Activity	Depth of capital market	Taxation	Investor protection and corporate governance	Human and social environment	Entrepreneurial culture and deal opportunities
4	Singapore	91.7	85.1	105.8	111.7	102.4	88.8
5	Hong Kong	92.0	90.7	104.8	107.9	96.4	83.4
7	Japan	95.1	87.4	105.5	93.5	88.4	94.8
11	Malaysia	95.7	83.7	99.6	90.6	70.9	86.8
20	South Korea	96.0	76.1	106.9	77.9	62.0	89.6
22	Taiwan	89.9	80.8	113.8	82.3	56.1	80.8
24	China	108.4	86.7	110.6	57.8	50.9	75.9

Source: The Venture Capital & Private Equity Country Attractiveness Index, IESE Business School, University of Navarra

Telecom and ICT/Internet dominate fund flows

Sector focus of the PE investments in Malaysia

Focus on deals in Malaysia is a reflection of the TMT trend in Southeast Asia

- Most PE firms in Southeast Asia follow a straightforward growth thesis, with current focus on deals in technology, media and telecommunications (TMT)
- There are approximately 102 million households in the region that were projected to achieve middle class status in 2015, which in turn creates investment opportunities in TMT

Malaysia's initiative to finance high technology companies

- The Government set up the Malaysian Technology Development Corporation (MTDC) to grow the PE/VC industry, especially in the field of technology
- More than 90% of technology entrepreneurs finance their ventures through informal sources ("friends and family"), about 60% source their early capital from venture capitalists
- Equity financing remain the best form of development capital for technology based firms

Investments from large corporations and SWF into the TMT sector

- Malaysia Venture Capital Management Berhad (MAVCAP) invests in a portfolio of at least 50 technology startups in Malaysia - KFIT, Offpeak.my and Supahands, to name a few
- Khazanah, Malaysia's sovereign wealth fund invests in innovation and technology companies, as well as a few of the largest and growing telecommunication service providers in Malaysia

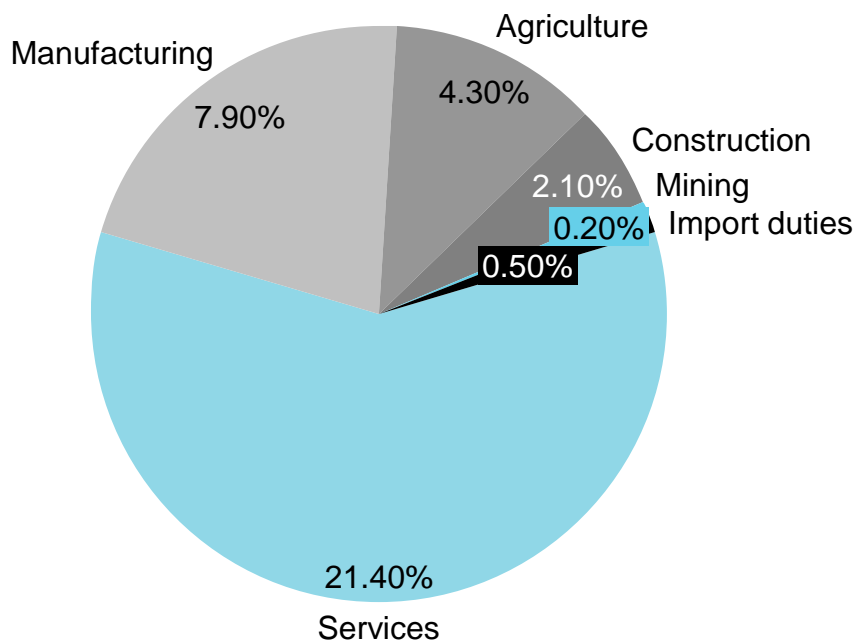
Some industry experts still feel most Malaysian (and Singapore) startups in TMT are "soft tech" rather than hard/deep tech (meaning their tech is still simple to copy)

Source "Private Equity in Southeast Asia", The Boston Consulting Group; "Venture Capital in Malaysia: A Case Study of Malaysian Venture Capital Berhad (MAVCAP)", Australian Journal of Basic and Applied Sciences; "Growing the Malaysian Venture Capital and Private Equity Industry", Syed Adil Hussain; "Selected Portfolio of Companies as at 30 September 2016", Khazanah Nasional; "Our Portfolio", MAVCAP

In addition, there seems to be opportunities for consolidation of efficiency improvement in the manufacturing SME sector

Opportunities in the traditional manufacturing and services sectors

Contribution of SMEs to overall GDP by key economic activity (%) 2015



Remarks

- Malaysia has a high number of small and medium enterprises, in excess of 645,000 at last count, which make up 97.3% of all corporations in Malaysia
- Most of these companies originally built their operations on the premise of cheap labor, and thus have very low productivity
- As market-based financing is expected to intensify in prominence given developments in the financial industry, it is anticipated that the PE sector will constitute a progressively substantial component of the capital-raising pipeline for early and growth stage companies
- With its operational expertise, network of contacts, and commercial knowhow, as well as its investment horizon that incentivizes decision-making for the longer-term, PE is well-placed to address the financing and growth needs of this relatively underserved segment
- Services and manufacturing sector are the largest contributors to overall GDP in the SME sector in 2015, based on the pie chart

Source: "The Impetus for Growth and Innovation" Securities Commission Malaysia; "SME Statistics", SMECorp Malaysia

Positive outlook for the Malaysian PE market, and Southeast Asia as a whole

Outlook of the Malaysian PE market

Government attempts to spur PE

- The Government is encouraging private-equity financing to help small businesses expand, and the country's largest state-run pension fund is leading the way by allocating more funds to private-equity investments
- Government-linked investment corporations' (GLICs) move to increase its asset allocation into both domestic and global private equity investments are supported by the Government.

Indications of a positive market outlook in Southeast Asia

- Investor sentiment across the Southeast Asian region is as strong as it has ever been; this is evident in fund-raising that have twice smashed the record for the largest funds being raised by an Asian-backed PE firm in 2015
- The drop in regional currencies presents an opportunity to PE houses, the majority of which being US-dollar denominated. Shareholders will realize the need to raise capital and will be more flexible on deal terms

Investment opportunities for investors

- Malaysia presents many investment opportunities for foreign investors including private equity houses – Creador, Navis Capital and Ekuinas, to name a few
- The Malaysian PE market has been buoyant in the retail, technology and consumer sectors
- Efforts will be intensified to target and attract industries in which Malaysia has strong foundations for new growth areas, such as the financial services and ICT sector

Source: "Malaysia attempts to spur private equity", Wall Street Journal; "Private equity a growing asset class in Malaysia" The Star; "EY Private equity briefing, southeast asia", EY; "Around Asia Pacific - Malaysia", Skrine; "Services Sector", Malaysian Investment Development Authority

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PE industry is still in early stage in Taiwan facing challenges and opportunities

Overview of PE sector in Taiwan

Current PE landscape in Taiwan – still early stage

- The private equity industry in Taiwan is still in an early stage; the industry suffered the impact of financial crisis shortly after being introduced in Taiwan and had difficulties recovering due to legal and political reasons
- The major local funds focus more on China and are registered as limited company
- Foreign private equity investment has been slow for the past few year because of significant scrutiny, failed cases, and regulatory restraints

Government initiatives to accelerate the development

- Taiwan government has been criticized for a lack of transparency and predictability in the investment approvals process and a VC/PE unfriendly legal environment
- Current guidelines on foreign investment state that private equity investors seeking to acquire companies in important industries must provide, for example, a detailed description of the investor's long term operational commitment and the investment's impact on sector competition
- Investors have experienced lengthy review periods for private equity transactions; in response, government started reviewing the legislative framework

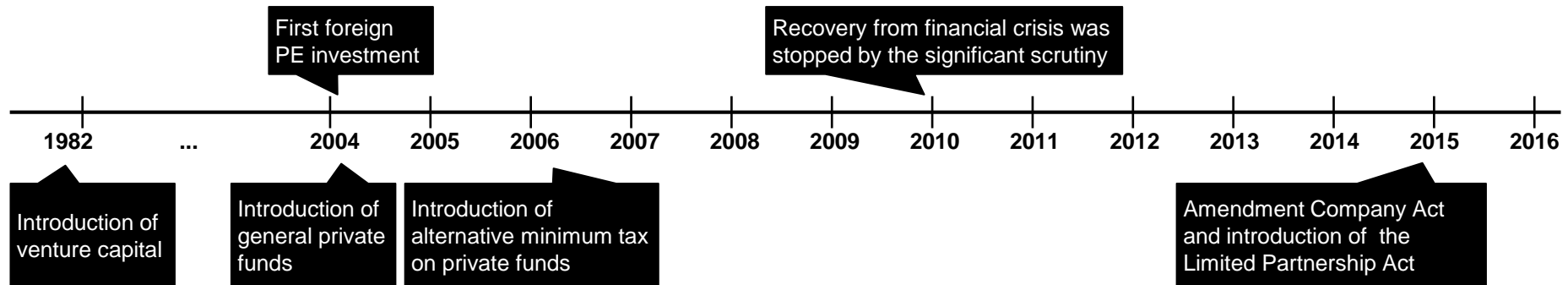
China is an unavoidable topic

- China is an unavoidable topic in cases of both inbound and outbound investment; most local funds have established funds in China and have been investing heavily in China
- The new administration is planning to encourage investment in Southeast Asia to diversify the risk from further investments in China
- Taiwan is a main investment destination for Chinese private equity firms despite low success rate caused by tight control of China-sourced funds and investors

Source: Ministry of Economic Affairs Investment Commission; [Taiwan: a growth agenda](#); [BBC News](#)

Taiwanese PE industry is affected heavily by regulation, with local funds focusing heavily on China

Taiwanese PE industry history, key milestones, and major funds



The CID Group, founded in 1998, focuses on emerging Greater China companies and has offices in Shanghai, Beijing, Chongqing, Taipei and the U.S. Today, it manages 3 LP funds with over 1BUSD capital.



IIH Asset Management Co. LTD, founded in 2006, focuses on Internet, healthcare, and consumer products sectors in the Greater China area. Today, it manages over 300MUSD capital.



MagiCapital Group Limited is a private equity firm with a focus on growth capital investments in the Greater China region.

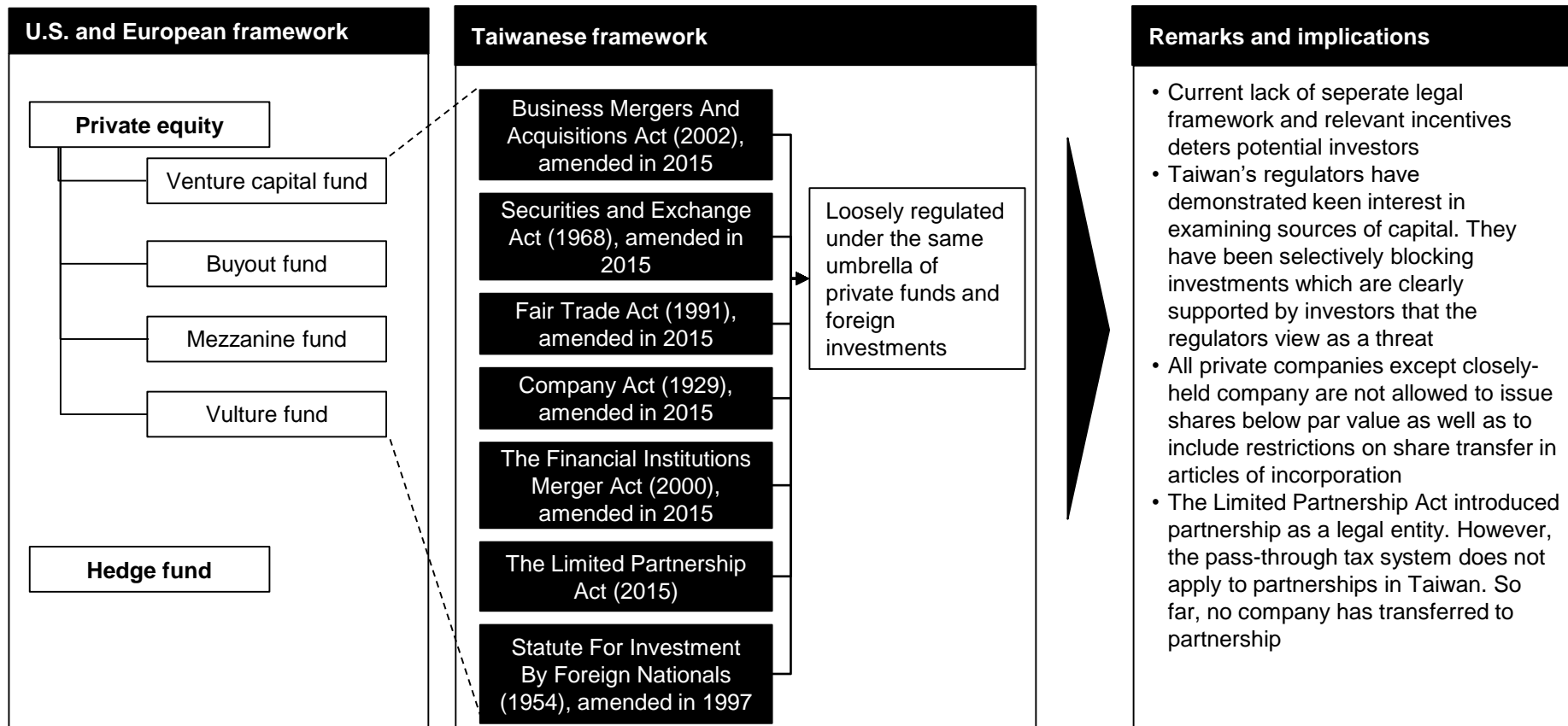


China development industry bank is the leader in venture capital business in Taiwan with a market share of over 30%. It focuses on medical, healthcare, and consumer goods sectors. It has two funds established in China with total capital of 3BCNY and one fund, CDIB CME Fund, Ltd, in Taiwan with capital of 1.5BNTD.

Source: Laws & Regulations Database of the Republic of China, companies' websites

Slow regulation development and bureaucratic review process is slowing down the development of VC and PE industry in Taiwan

Legislative framework of Taiwan PE sector



Source: Laws & Regulations Database of the Republic of China

Taiwanese PE industry has been struggling after the financial crisis in 2007

PE investment in Taiwan

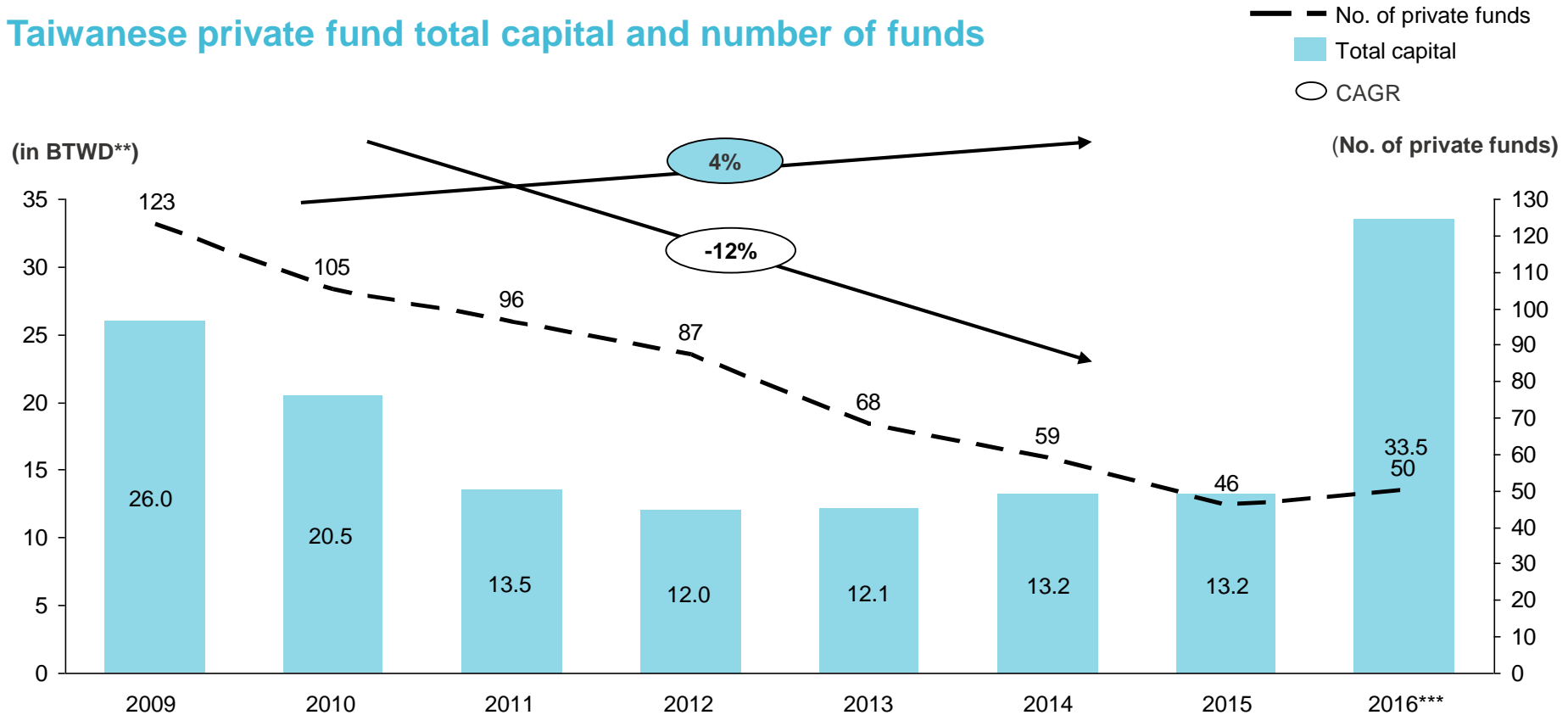
Called capital, MUSD



Source: Thomson Reuters

Taiwanese private funds* have been declining in recent years, with a rebound in 2016 after new ruling party took office

Taiwanese private fund total capital and number of funds



New ruling party took office in May 2016

*Private funds include private equity funds and other private-sourced funds

**1BTWD is approximately 31MUSD using currency rate on 10/23/2016

*** As of September of 2016

Source: Securities investment trust & consulting association of the R.O.C.

The year 2016 has been a year of challenges and changes for VC and PE industry in Taiwan

Key issues in Taiwanese PE market and outlook

Ongoing political tension with China

- Inbound investment from China is restricted; Chinese investors can only invest in businesses listed on a so-called positive list, subject to the approval of the Investment Commission (IC)

New party took office and promised reform

- The new administration has proposed numerous new plans to improve economic performance; one of the proposals is to boost cross-border investments by attracting investment from local and foreign venture capital and private equity firms
- Private equity regulation development is high in the agenda of new administration; Taiwan's government encourages foreign private equity, provided it is not controlled by Chinese funds or investors

Source: Taiwan Investment commission; [United Daily News](#); [2016 Investment Climate Statements of Taiwan](#); [Taiwan: a growth agenda](#)

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Vietnamese PE market is still small with opportunities from privatization, reforms and start-ups

Overview of Vietnamese private equity market

Small size and dominated by foreign capital

- Most of investment activities are small deals led by a few locally based PE firms which raised funds from overseas investors; a few large deals (more than 30MUSD) in recent years were led by global PE funds
- Currently, there is no PE fund for local investors because of the lack of large institutional investors and preferences of individual investors for short-term investments in the local market

Few PE firms focusing on classic PE

- Many funds in Vietnam apply the term "private equity" also to real estate and OTC market
- Only a few funds, for example Mekong Capital, VI Group and PENM, actually focus on classic private equity deals with comprehensive plan for adding value, legal agreements with investor protection/rights and board representation

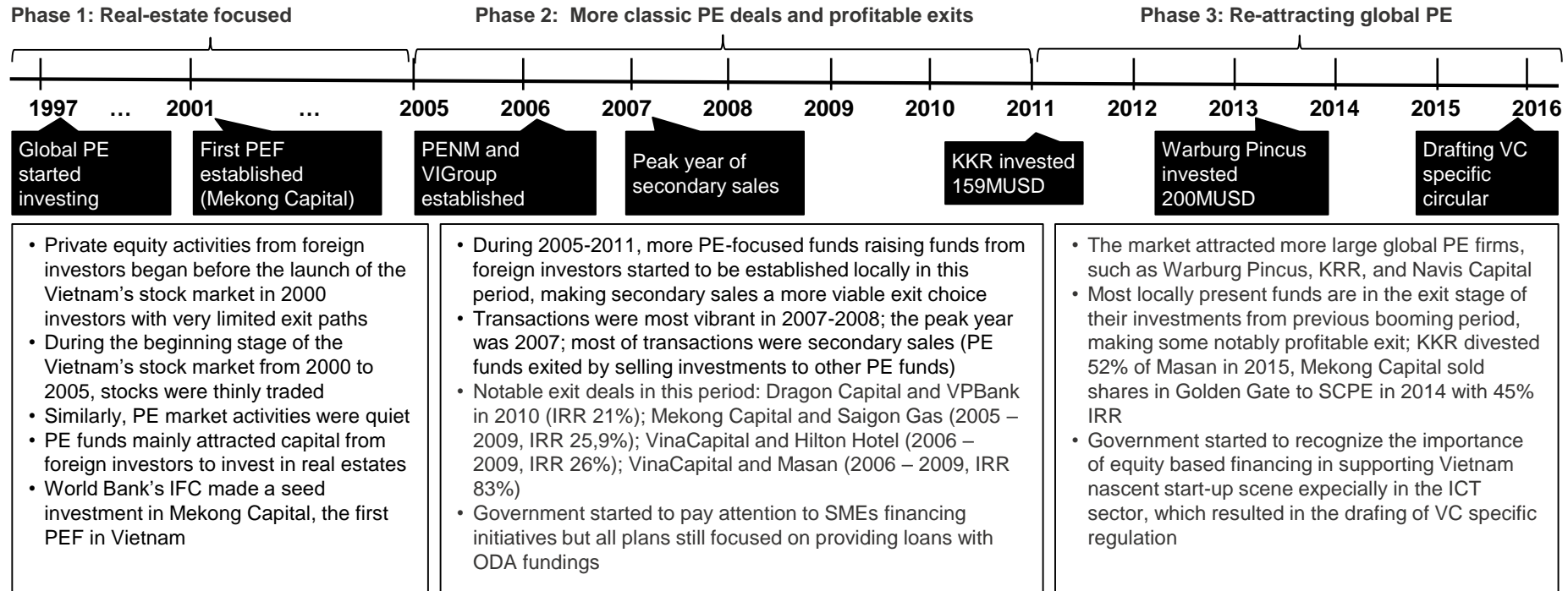
Opportunities from SOE privatization and thriving start-ups

- More high-value deals are to be expected from large-scale privatization of state-owned enterprises (SOEs) and opportunities to add value by transforming governance structure and financial planning capabilities
- Vietnamese government is determined to transform the country into a start-up nation by 2020, hoping to attract more investments from international VCs
- As consumer spending, driven by a young population and growing middle-class, continues to increase, consumer-driven sectors (retail, food and beverage, education, healthcare, hospitality and leisure) continue to attract significant investments

Source: press articles, Reddal analysis

Due to lack of incentive and uncertain regulatory environment, Vietnamese PE industry is still in a very early stage of development

Vietnamese PE industry history and key milestones



The slow development of PE market in Vietnam despite 20 years of impressive economic growth can be attributed to both external and internal factors (*):

- External: foreign aid donors' influence through funding and technical assistance, especially from Japan, had mainly advised the Vietnamese government on credit-based financing schemes
- Internal: weak policy making capabilities to handle complex areas such as PE regulation and lack of lobbying from local incumbents who seem to be enjoying competitive advantage as early movers with strong political ties in an opaque regulatory environment

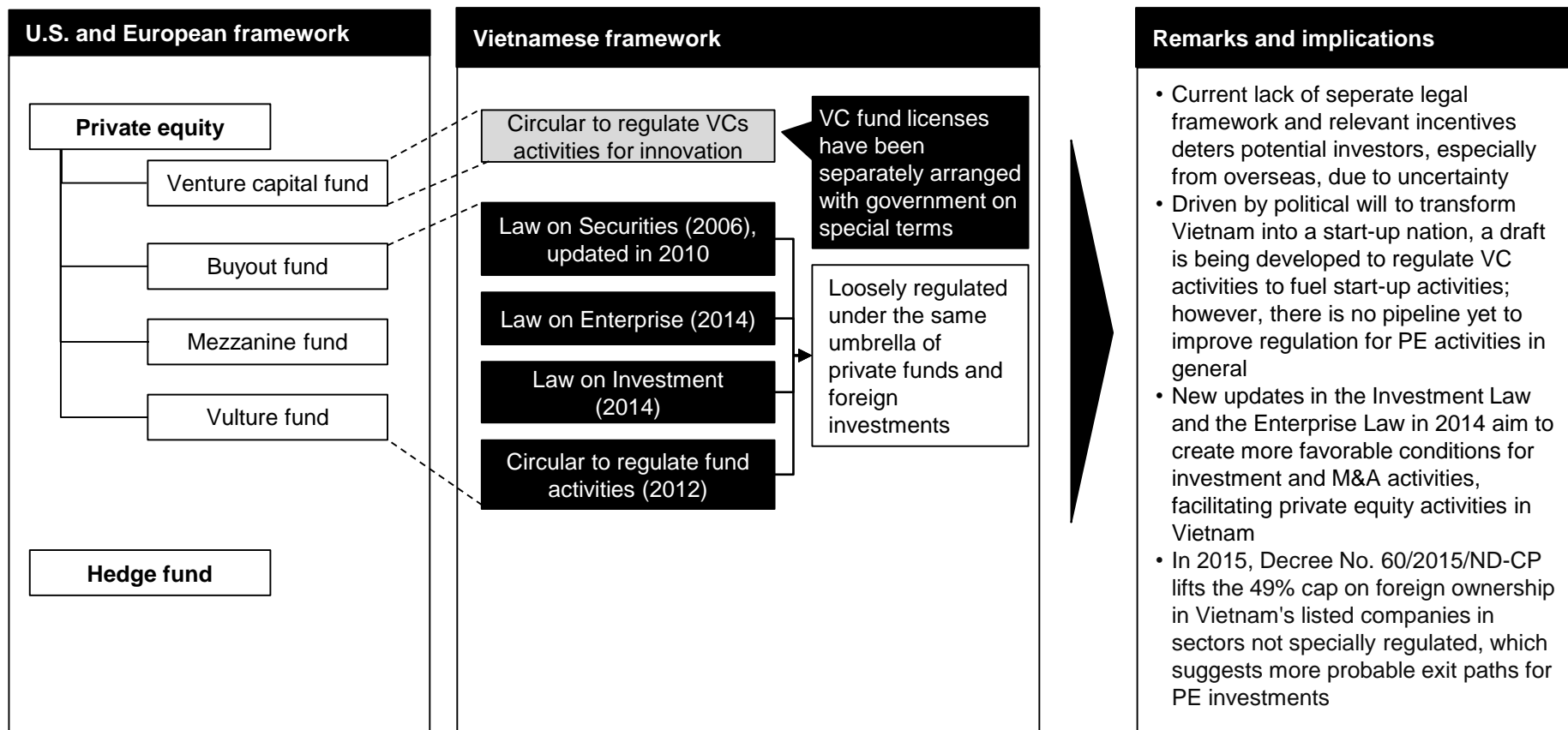
*Klinger-Vidra (2014), "Building a venture capital market in Vietnam: diffusion of a neoliberal market strategy to a socialist state"

There is currently no separate legal framework for venture capital and private equity in Vietnam, but first steps are taken for VC legislation

Regulatory framework in Vietnam

 Draft

 Valid

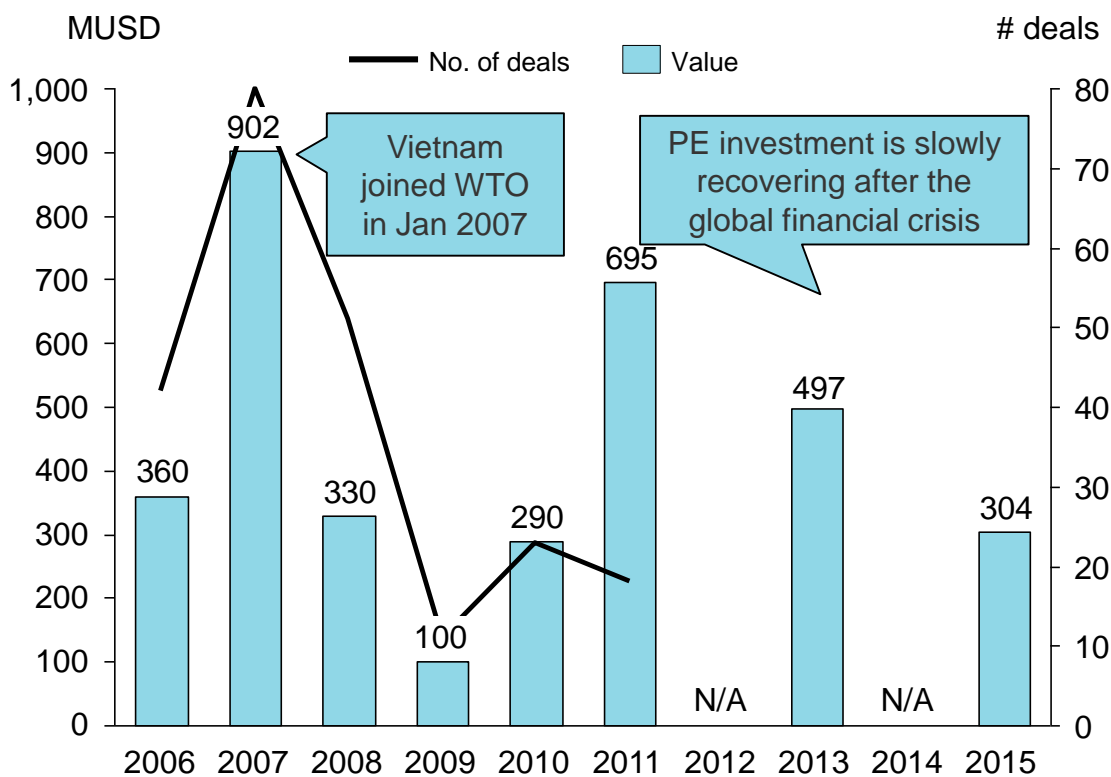


Source: <http://uk.practicallaw.com/3-620-8120?q=private+equity>, press articles, Reddal analysis

PE activities were vibrant prior to the global financial crisis and are slowly recovering, driven by high value deals from global PEs

Vietnamese PE market development

Vietnam PE deal flow



Notable deals

- In 2016, pan-ASEAN fund, Navis Capital, invested in healthcare (Hanoi French Hospital) in Vietnam – deal value undisclosed and Warburg Pincus publicly targeted Vietnam as a long-term investment target in Asia
- In 2014, SCPE invested 35MUSD in Golden Gate, a well managed Vietnamese restaurant operator
- In 2013 Warburg Pincus invested 200MUSD in Vincom Retail in 2013 and additional 100MUSD in 2015
- In 2011 and 2013, KRR invested in Masan Consumer with the total value of 359MUSD, putting Vietnam on the regional PE radar. In 2015, KKR sold 50% of its stake in Masan Consumer
- Roughly 170 large SOEs have been identified for stake sales over the next 5 years; some popular names investors have been anticipating are: Vietnam Airlines, Vinaphone and Mobifone (telecom), Ben Thanh and Sabeco (F&B), Vinare (reinsurance)

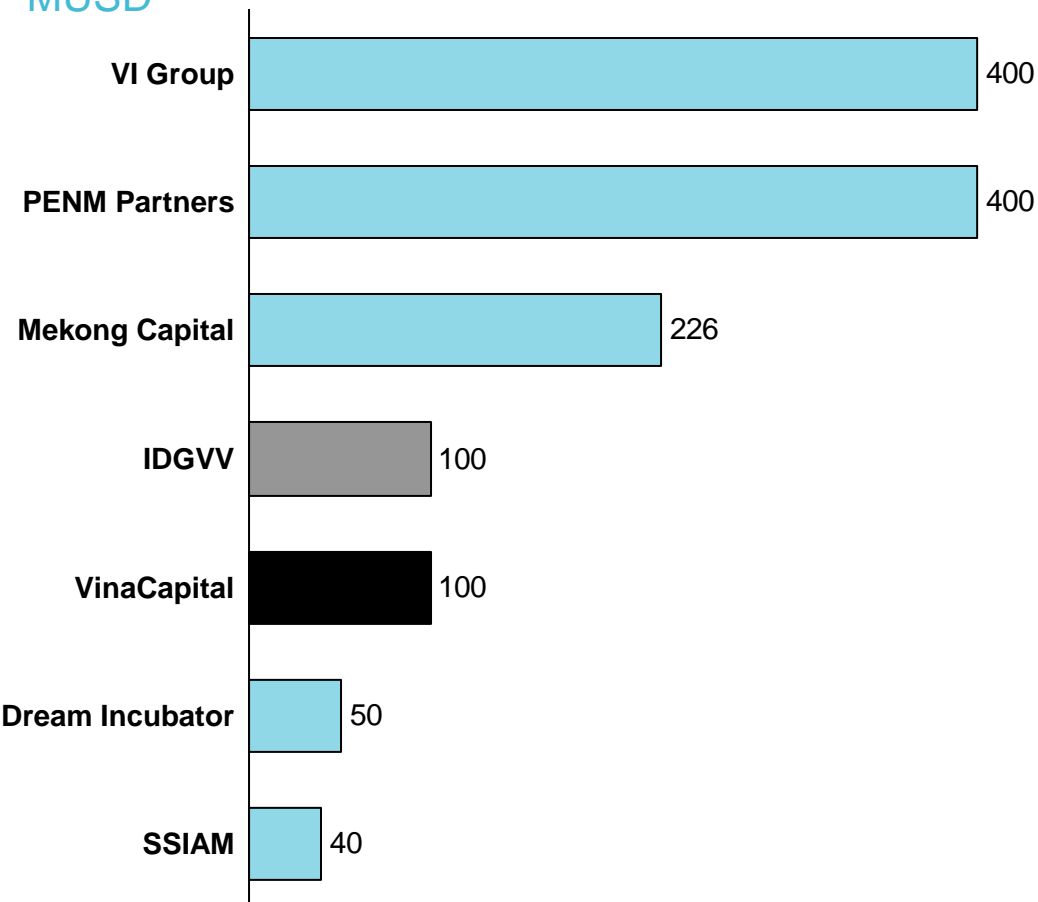
Source: KPMG, BCG (2012), Deal Street Asia (2015), Financial Times (2016), press articles

The market is led by a few foreign raised, locally-based funds with no PE firm with local investors yet

PE houses by fund size (committed, as of end of September 2016)

MUSD

- PE only funds
- General funds
- Venture capital

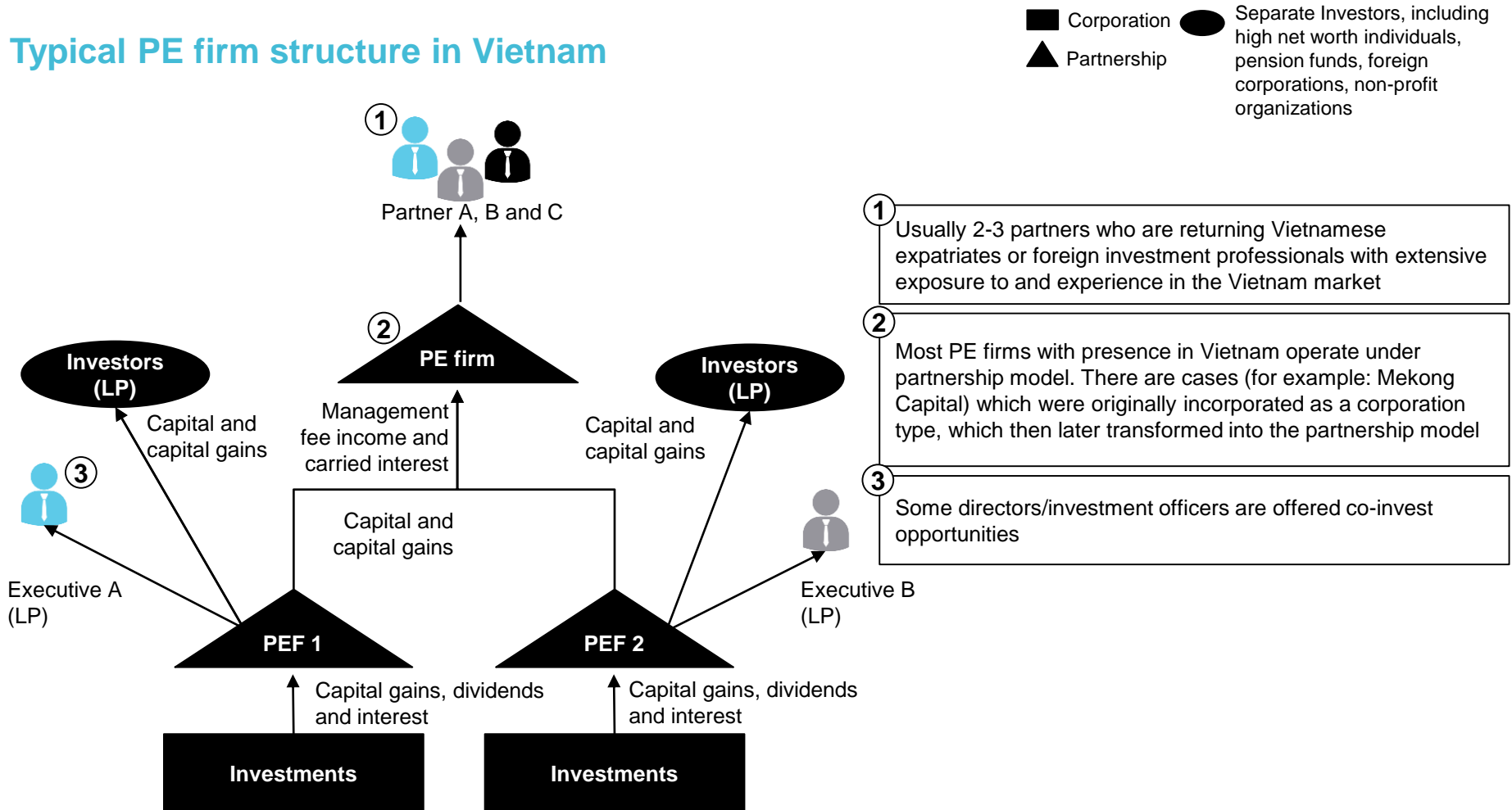


- VI Group's strategy is to take significant minority stake where they have industry expertise
- PENM Partners' focuses on minority investments ranging from 10 – 30MUSD for 10 – 40% stake
- Current portfolio includes agriculture, chemical, oil and gas, natural resources, industrial goods, and insurance
- Mekong Capital focuses on investments in consumer-driven businesses, such as retail, restaurant, consumer goods, and consumer services
- First tech-focused VC fund in Vietnam since 2004
- 40 investments in technology, media, telecom and consumer sectors
- As of Sept 2016, PE accounts for 12.3% in VOF, investing in F&B, healthcare
- In Sept 2016, announced the plan to raise 200MUSD for a new fund to invest in private equity in Vietnam
- A Japanese JV with investment focus in restaurant chains, consumer goods, healthcare and education
- Planning to raise a new fund with double size
- DAIWA-SSIAM II successfully raised fund in September 2016
- The fund focuses on agriculture, services, and manufacturing

Source: funds' websites, press articles

Similar to Korean market, PE firms in Vietnam act as general partner of its fund directly, rather than through a separate entity

Typical PE firm structure in Vietnam

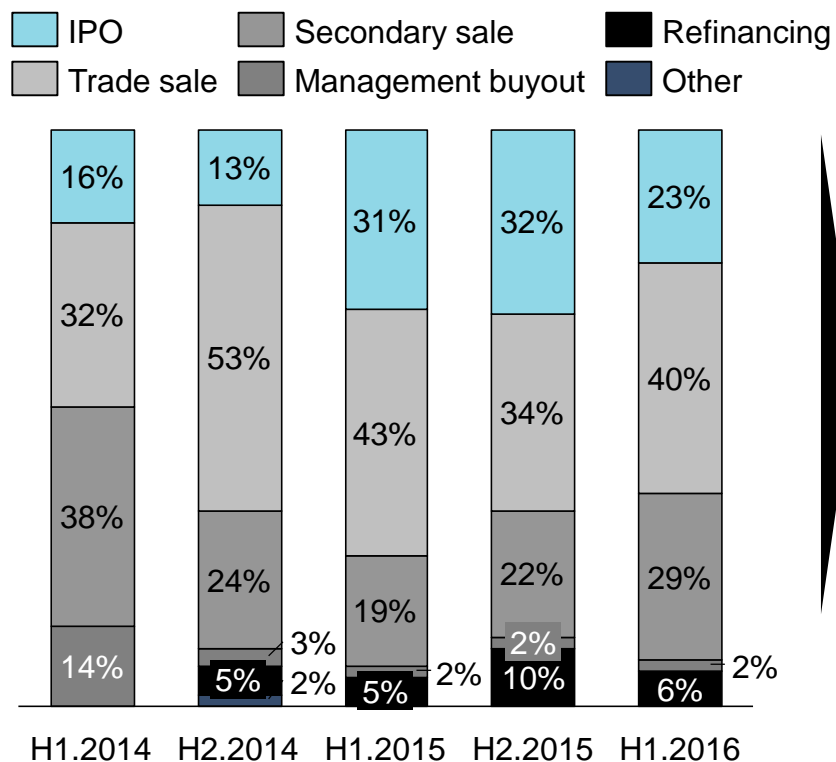


Source: company websites

Trade sale is viewed as an attractive exit strategy for PE investors, followed by IPOs

View of major fund managers in Vietnam regarding most achievable exit strategy

Preferred exit strategy over last two years,
% of respondents



Remarks

- In recent years, trade sale has been a common exit routes for major PE firms
- In many cases, trade buyers are the foreign companies operating in the same industry as the target company (M&A); in 2011 Mekong capital and PENM Partners sold stakes of ICP to Mario Ltd – an Indian consumer-good company
- M&A activities are predicted to increase significantly as Vietnam joins TPP (if it materializes)
- IPO is another possible exit route, yet IPO is generally tough for some sectors, for example tech companies as the tech market is not very mature in Vietnam
- Secondary sale has been increasing in popularity recently; usually buyers are foreign venture capital funds which just started investing in Vietnam, in 2013 Mekong capital sold stakes of MWG to CDH Electric Bee – a VC registered in British Virgin Islands; in 2014, Mekong Capital sold stakes of Golden Gate to Standard Charter Private Equity (SCPE)

Source: Grant Thornton's survey: Look out for investment growth (2016)

There are several bottlenecks that need to be overcome to realize the full value creation potential

Current challenges affecting Vietnamese private equity performance

Corruption, bureaucracy and regulatory limitation

- Foreign investment in many businesses is constrained by sector-specific laws regarding foreign ownership threshold, minimum investment requirement, market access, restrictions on land ownership and conflicting regulations on land use
- Weak legal framework regulating PE investments creates uncertainty and bureaucracy in regulating funds for foreign indirect investment creates higher risks, including foreign exchange risks, for foreign investors
- Tax treatment is currently more favorable for listed stock transactions

Weak management and differences in expectations

- There has been a shortage of well trained high-level managers in local companies, where they are still reluctant to hire overseas experts as managers
- Lack of information transparency and differences in valuation expectations (especially in SOE assets to avoid being charged with “destroyed state wealth”, a criminal offense, are the most critical issues in making deals
- Corporate governance and financial planning capabilities are two areas where PE investors can add value

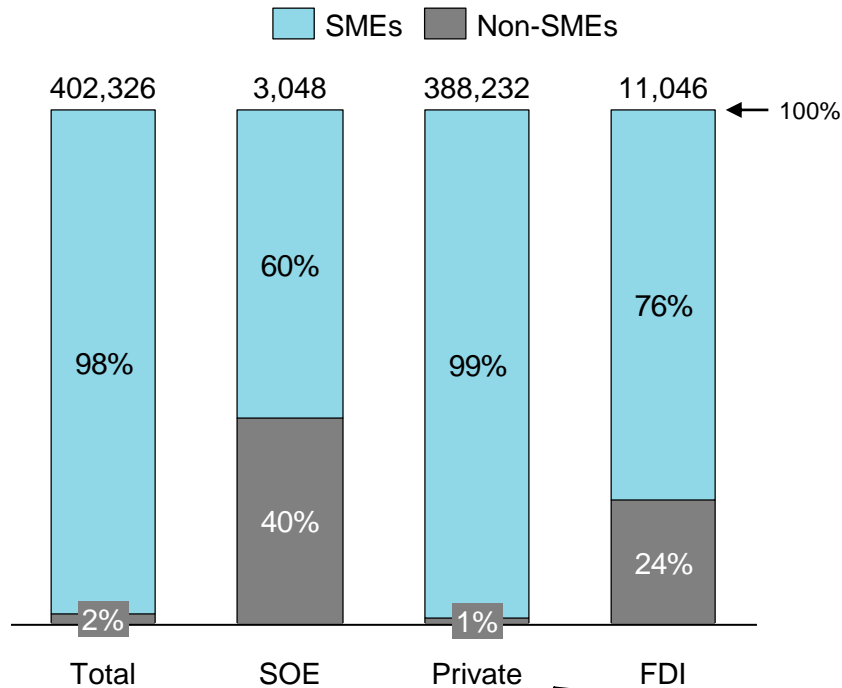
Lack of targets with right scope and size

- With a few exceptions, majority of local companies are too small in both size and scope to make them attractive targets for PE investors, especially from overseas
- Equity investment is not well aware as a formal source of financing to majority of local companies
- Despite high interest rates, Vietnamese entrepreneurs are more willing to take loans than giving up equity to finance their businesses, which might be driven by a cultural preference to hold on equity ownership and decision making rights

Vietnamese SMEs account for 98% of total companies but only contribute about 40% to total economic value creation

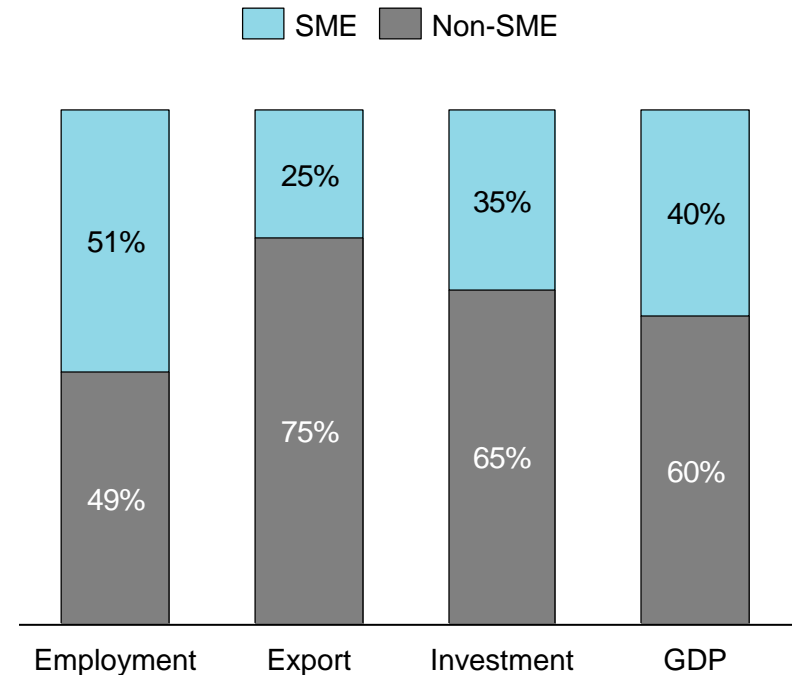
Distribution and contribution of Vietnamese SMEs*

Number and share of companies by size and sector, 2014



97% of SMEs are in the local private sector

Contribution of SMEs in different economic indicators, %



FDI sector accounts for more than 70% of annual exports; only 30% of local SMEs participate in supply chain for the FDI exporting sector

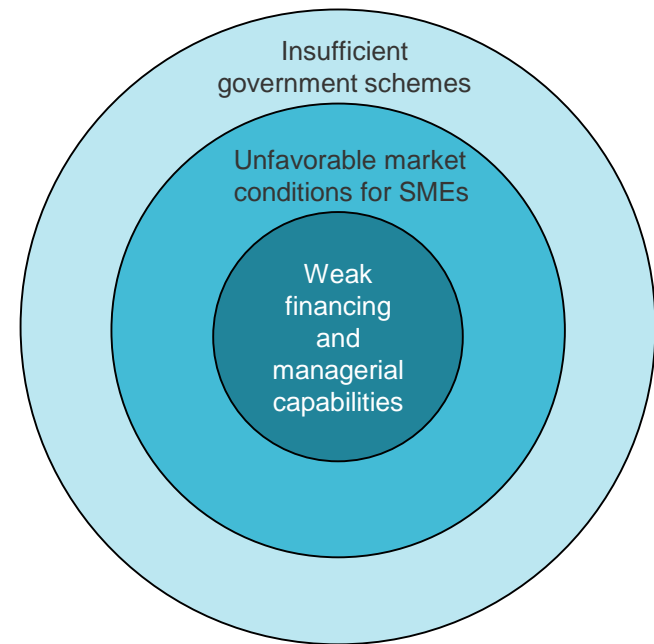
*SMEs are categorized as followed: small and micro (below 50 persons), medium (50 – 199 persons) and large (above 200 persons)

Source: General statistics office of Vietnam

Vietnamese SMEs face layers of difficulties from both internal and external factors but there have been some positive developments

Factors affecting Vietnamese SME performance

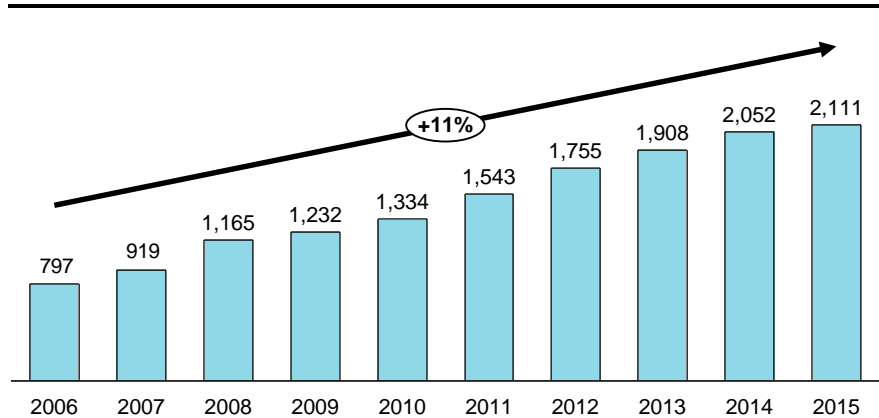
	Challenges	Positive developments
Institutional drivers	<ul style="list-style-type: none">• Government focus in the past 20 years has been on attracting FDIs while neglecting the SME sector• Corruption and red-tape continue to be a burden for SMEs tight budget	<ul style="list-style-type: none">• SME Development Fund was finally launched in 2016• A new Law on supporting SMEs is being drafted and sponsored by Ministry of Planning and Investment (2016)
Market drivers	<ul style="list-style-type: none">• Less than 30% SMEs can access bank loans to finance their growth as banks prefer to lend to big corp. or SOEs• Increasingly aggressive competition from MNCs in local market	<ul style="list-style-type: none">• Expanding middle class segments with higher purchasing power of a 90 million population• Increasing urbanization spread throughout the country making access to market easier
Internal drivers	<ul style="list-style-type: none">• Small size limits SMEs ability to invest in technology and innovation• SMEs are trapped in contract manufacturing with low value added content or serving niche local segments• Traditional business owners have limited capability to build partnerships, actively seek new markets and build strong brands	<ul style="list-style-type: none">• Increasing influx of returning Vietnamese expats and diaspora helps fill in the managerial gap• Professional education and online learning are flourishing• More active PE investment and ecosystem building are slowly transferring knowledge to local business community



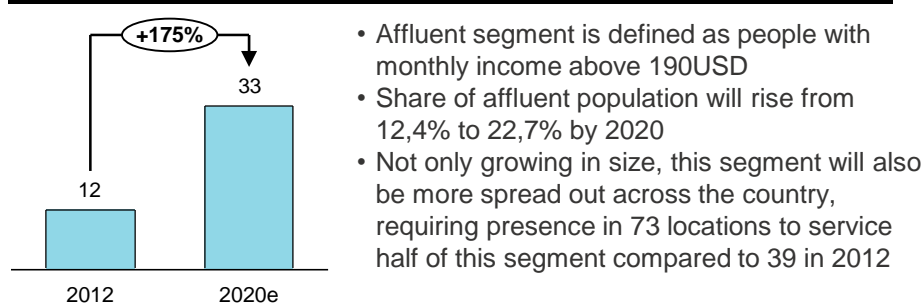
Driven by economic and consumption growth, food and beverage, retail, and healthcare are considered the most attractive sectors to invest

Attractiveness of Vietnam consumer driven sectors

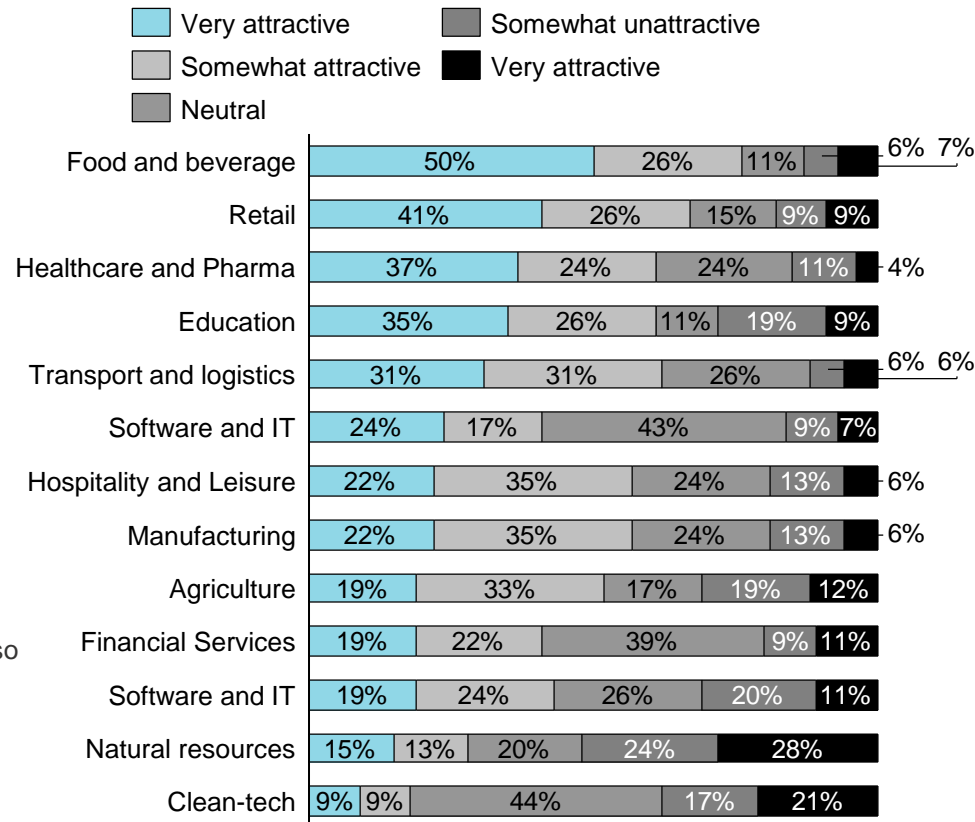
GDP per capita
2015 USD



Size of affluent population, millions



Sector attractiveness
% of respondents



Source: World Bank (2016), BCG (2013), Grant Thornton survey (2016)

ICT, education technology and green agriculture are among emerging sectors where rising start-ups can grow into strong SMEs

Potential emerging sectors

	Game and app development	Alternative education / “edtech”	Green agriculture
Development	<ul style="list-style-type: none"> Gaining traction with recent VC funding: Goldman Sachs and SCPE in e-wallet Momo (28MUSD), 500 Startups VC with its new 10 MUSD Vietnam-focused fund; Lozi, food-finder and order app, and a 7-figure investment from DesignOne Japan and Singapore’s Golden Gate Ventures 	<ul style="list-style-type: none"> In the last five years, there have been a plethora of new learning models in a variety of areas from test preparation, English to soft skills, music and arts Topica Edtech Group is a pioneer in e-learning not only in Vietnam but also in neighboring markets such as Philippines and Thailand 	<ul style="list-style-type: none"> Exports of agricultural, especially fruits and vegetables, products have reached 2,2BUSD in 2015 with an impressive 50% growth Current areas for organic farming (23,000ha), is only 0,2% of total agricultural land but it is growing
Market drivers	<ul style="list-style-type: none"> The start-up ecosystem is getting stronger, endowed with young students with high IT skills and committed support from both government and tech giants 	<ul style="list-style-type: none"> Middle-class consumer segment is growing, who is more able and more willing to pay for higher quality education services beyond formal channels Current infrastructure is significantly lagging behind demands, calling for innovation to solve the capacity gap 	<ul style="list-style-type: none"> Locally, consumers are increasingly aware of food safety, concurrently pushing for higher standard in agriculture practices
Regulatory drivers	<ul style="list-style-type: none"> The government is showing strong signals to support ICT growth including initiating partnership with foreign donors for ecosystem building and funding, passing favourable legislation such as tax breaks for IT professionals 	<ul style="list-style-type: none"> Regulatory restriction for education sector is expected to be loosened in the next year, which makes it easier to attract foreign investment 	<ul style="list-style-type: none"> Vietnam’s participation in comprehensive FTAs such as TPP presents opportunities for exports but also pose challenges to improve production standards to meet stringent technical barriers of export markets

Family owned businesses in consumer driven sectors are gathering attention while SOE privatization remains attractive in the long run

Outlook of Vietnamese private equity market

Steady growth with sector specific opportunities

- Two key fundamental drivers are robust economic growth (above 6% GDP growth expected for 2016) and expanding consumption power, coupled with slowly improving regulation reforms starting from VC specific regulation
- Retail and F&B sector will continue to be the most attractive sectors for PE in the short term driven by expanding and young middle-class consumers while education sector is increasingly attracting investors with quality targets
- Game/app development, alternative education, education technologies and green agricultures are segments where promising SMEs can emerge

Family owned companies as a main deal source

- Although high-value SOE privatization deals are still expected, delays in the implementation falling short of plan in 2015 have dampened investors' interest recently
- In the latest survey in mid 2016, private/family-owned businesses with controlling stakes owned by management, with strong performance dependency on management/owner, have become the first choice of deal sources in Vietnam

SOEs privatization remains key driver in the long term

- A large share of Vietnam capital is still trapped in the inefficient SOE sector, occupying very strategic sectors such as agriculture, infrastructure, transportation and natural resources
- In the long run, to unleash this potential, privatization of SOEs is inevitable and remains an attractive opportunity for PE investors to capture values by restructuring their operations
- However, its attractiveness depends on the speed and transparency with which the government is implementing this initiative

Source: Grant Thornton survey (2016), Reddal analysis

Agenda

Iran is entering a new phase, where private equity can help drive growth especially in the SME and technology startup sectors

Finland, South Korea, Malaysia and Vietnam have all gone – or are going – through a similar process and represent different stages of maturity

Finland has built its private equity ecosystem step by step, but some gaps still remain

Korean private equity is expanding rapidly, but is polarized and suffers from unclear and ever changing regulation

Malaysian private equity is still early on, but can play a key role in building up SME capabilities, and has a strong SWF element

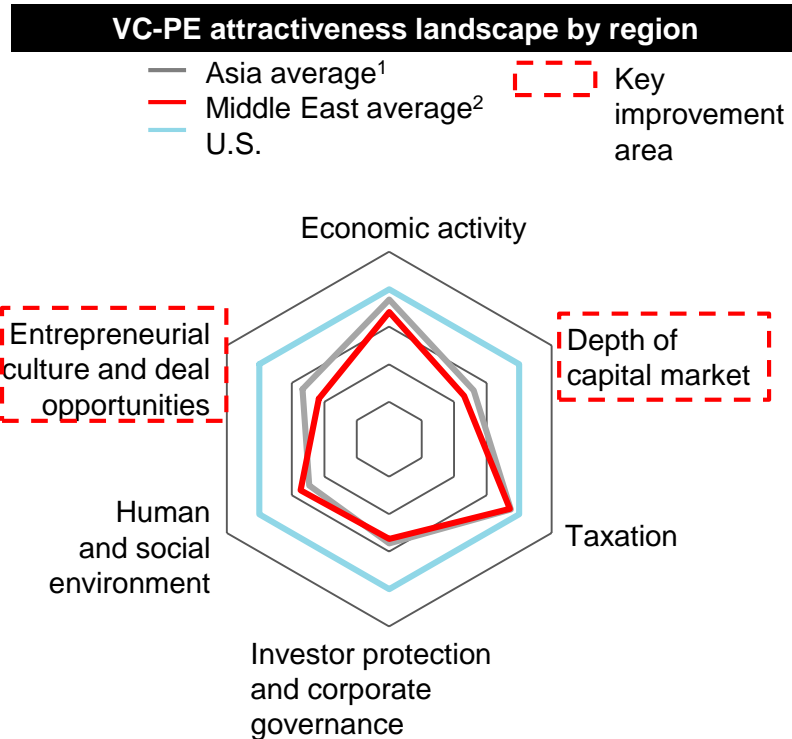
Taiwanese private equity faces both challenges and opportunities, but seems to be in a political gridlock

In Vietnam foreign capital is starting the private equity sector, but the legislative framework is still missing

Iran can benefit from the experiences of these countries, but must also address fundamental issues in its economy

For Middle Eastern countries development of entrepreneurial culture and capital market is priority

Middle East country VC-PE attractiveness



Key improvement area	Proxy
Depth of capital market	Size of stock market
	IPOs and public issuing activity
	M&A market activity
	Debt and credit market
	Stock market liquidity (trading and volume), bank non-performance loans and financial market sophistication
Entrepreneurial culture and deal opportunities	Innovation
	Science and technology journal articles
	Ease of starting and running a business
	Simplicity of closing a business
	Recovery rate

¹Armenia, Azerbaijan, Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Japan, Kazakhstan, South Korea, Kyrgyzstan, Malaysia, Mongolia, Pakistan, Philippines, Russia, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam were covered to calculate Asia average; ²Bahrain, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria and United Arab Emirates were covered to calculate Middle East average

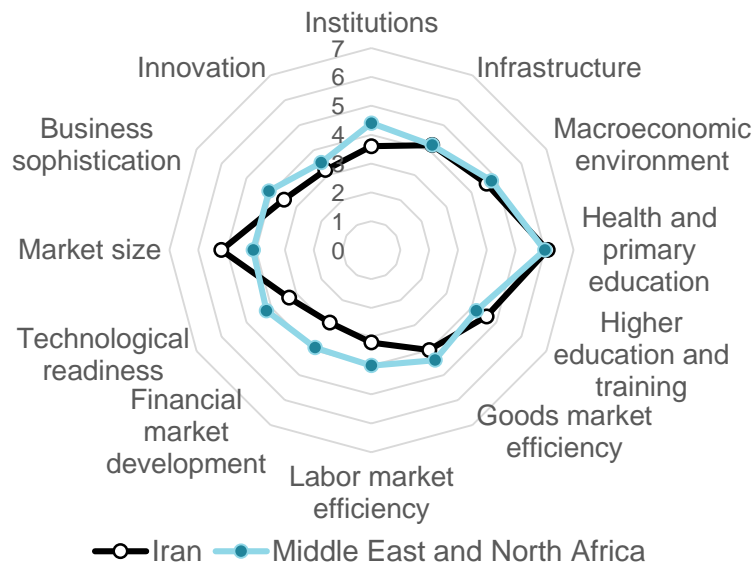
Note: chart using scores for each driver; Asia and Middle East average is weighted average of individual country data by GDP or population

Source: IESE Business School, University of Navarra, *Venture Capital and Private Equity Country Attractiveness Index* (2016)

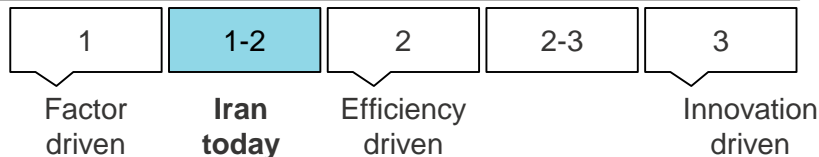
Despite recent improvement, access to financing is still the main barrier against starting a business in Iran

Ease of starting a business in Iran

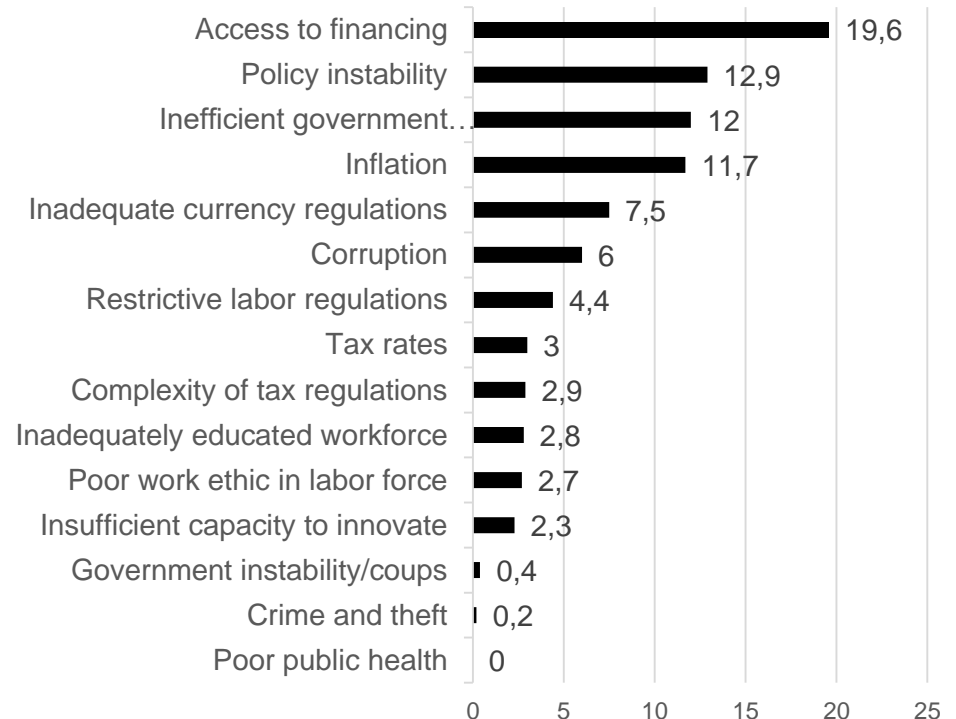
Global competitive index – Iran (score*)



Stage of development



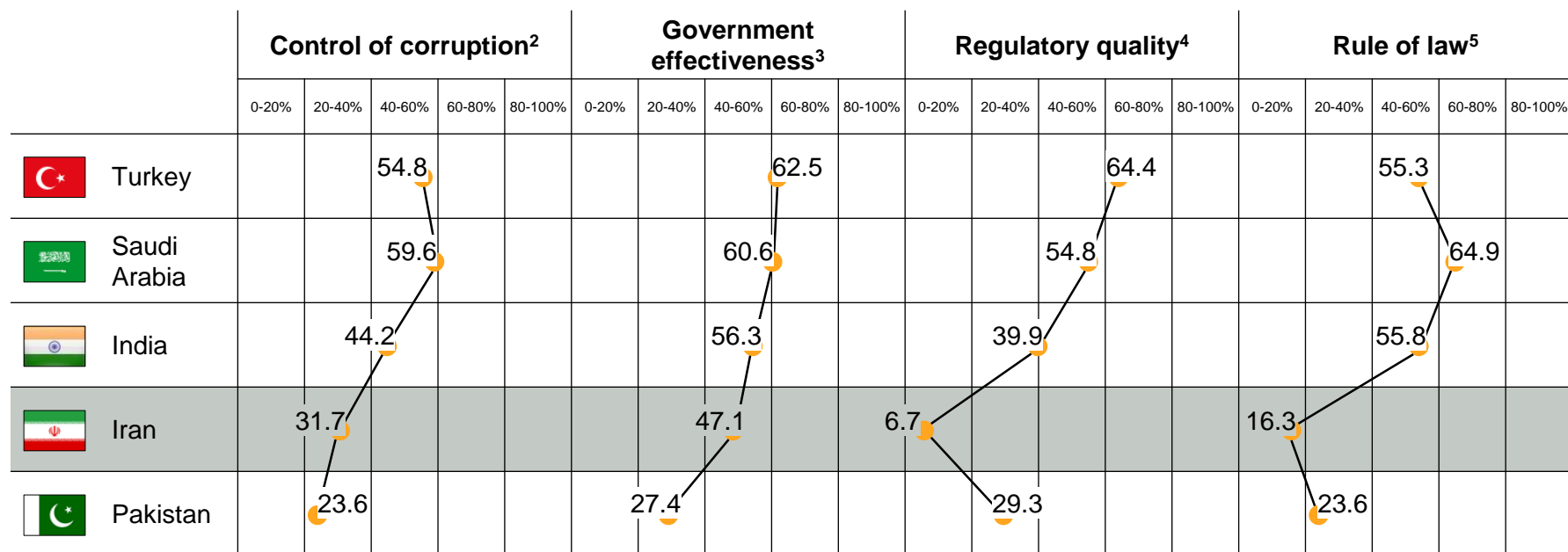
The most problematic factors to do business in Iran (score*)



Source: World Economic Forum – 2016

Iran still ranks low on regulatory quality and rule of law compared to similar economies

Political risk – regional benchmark¹



¹ In percentile ranks – the higher the score, the better the situation

² Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption

³ Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures

⁴ Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development

⁵ Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society (e.g. quality of contract enforcement, property rights, the police, etc.)

Source: The World Bank (October, 2016)

Private equity sector in Iran is slowly taking off with some activities witnessed in deal-by-deal manner and venture capital funds

Overview of PE sector in Iran

PE in a deal by deal manner is emerging

- In the past 4-5 years there have been attempts at starting PE funds in Iran, but most attempts have failed
- Foreign investors are still not ready to invest in PE funds at this stage – when there is so much risk and uncertainty
- However, investors are willing to invest in funds that seek to buy a specific company (deal-by-deal investment)

Investment in technology focused VCs, accelerators and incubators increasing

- Sarava started with around 7MUSD and invested in successful startups such as Digikala
- Rocket Internet and MTN have a JV
- Pomegranate is also a foreign fund that invested into Sarava
- Iratel is another new player in the space
- Avatech is one of the main accelerators (owned by Sarava)

Source: Interview with industry expert at major financial institution in Iran

VC-PE companies are opening in Iran, some headquartered abroad, many with sector-specific approaches

Main players in Iran market



GriffonCapital

Griffon Capital is a private equity firm focused on Iran, aiming to capture institutional funds



SARAVA

Digikala, Café Bazar, Sheypoor, and Divar are among the most famous Iranian startups and they all benefit from Sarava VC's investment



TURQUOISE
PARTNERS

- Turquoise Partners is in the process of launching the first Iran-focused private equity fund with a Swiss-based banking partner
- The fund will mainly invest in Iranian FMCG, food and beverage retail, fashion retail, mining, hospitality and technology start-up sectors



SHENASA

Shenasa is the first VC, according to Western standards, which established in 2012 and is still among the main players in the market.



The Swedish tech investor, Pomegranate investment, has raised 60 million Euro in Digikala (Iran's Amazon)



PSIG VC seeks out people with great ideas in a range of technology sectors from e-commerce to mobile and financial technology applications and services. PSIG have been investing in famous Iranian startups Buyex and ZarinPal



Iranian startup Snapp scooped up 22.3 million Euro investment from SA-based MTN to boost ride-sharing in Iran



Iratel Ventures, which is the investing arm of Iranian telecom company Pars Iratel, is raising a US\$10 million to invest US\$50,000 to US\$100,000 in startups in or related to Iran, especially in the mobile arena

Despite a bold vision, the market reality is harsh – concrete practical actions are needed

Disconnect between vision and reality

According to Iran's 2025 vision, 20 percent of the country's revenue streams should be provided from the knowledge-based activities and SMEs

- Despite the recent movements, the VC industry is still taking its very first steps in Iran
- Lack of VC-PE specific laws and regulations is one of the most important obstacles for this industry in Iran
- Although the technical aspects are quite strong in Iran's VCs (especially local ones), most of these companies are suffering from the lack of critical expertise required in this industry
 - Startup valuation expertise
 - International experience
 - Strategic view
 - Business management mentoring facilities

Analysis of evolution of private equity market in these countries present key policy recommendations for Iranian PE market development

Initial recommendations to foster PE development in Iran

Address deficiencies in the regulatory environment

- Assess current tax and commercial regulations to eliminate unnecessary complexity and administrative burden to PE industry
- Review capital gains tax rates and wealth taxes which can deter investment
- Evaluate legal framework related to intellectual property protection to ensure sufficient incentives for innovative technology firms to emerge

Encourage investment in SMEs and Family Owned Enterprises (FOE)

- Regulatory framework must address numerous challenges specific to SMEs and FOEs
- Consider encouraging VC and PE investment in SMEs/FOEs through government guarantee schemes and related policy measures to increase investor confidence

Ensure there is a path to IPOs

- Developed capital market is key precondition for buyout activities, where IPO is one of means to exit
- Although trade sales are usually much larger than IPO exits, IPOs are crucial for companies to establish valuation
- To extent domestic stock exchange cannot accommodate listing of high growth companies, means to facilitate Iranian companies' listing on overseas market should be considered

Substitute role of institutional investors and large banks

- In most markets, institutional investors and banks constitute primary source of capital; yet, most institutional investors in developing markets have limited capital available
- Policy makers need to assess possible measures to encourage individual or corporate, as well as foreign equity, participation in the PE industry through tax or other incentives

Source: Reddal analysis; MENA-OECD Competitiveness Programme, MENA Investment Policy Brief



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successful growth!