Renaissance Capital

EMEA healthcare
Ready to live longer

Public healthcare systems in EMEA suffer from underfunding, and while technological changes promise lower prices in future, we believe the systems need overhauling. Saudi Arabia and Egypt are enacting changes that should benefit local private healthcare providers. Russia's and Romania's systems are in the biggest need of an overhaul but we think this is unlikely to happen soon. To date, we believe Turkey and to a lesser extent Georgia have the most functional healthcare systems in our region. Stock-wise we prefer Turkey's MLP Saglik Hizmetleri (MPARK) and Georgia Healthcare Group (GHG; see Figure 1 for ratings and TPs).

Sector update
Equity Research
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Healthcare
EMEA

Alexander Kazbegi
+41 (78) 883-4527
AKazbegi@rencap.com

Mikhail Arbuzov
+7 (495) 258-7770 x4594
MArbuzov@rencap.com

Artem Yamschikov
+7 (495) 258-7770 x7511
AYamschikov@rencap.com

Metin Esendal
+44 (207) 005-7925
MEsendal@rencap.com

Hadeel El Masry
+01 (00) 388-0822
HELMasry@rencap.com

Time to look after health

From our observations, EM consumers tend to display similar purchasing patterns as disposable incomes rise – with cars, designer clothes and white goods the priority; investment products, such as real estate, then coming into play; but once those needs are satisfied as well, consumers turn their attention to health as now they want to live longer and healthier to enjoy the very things they own. In most EM countries we follow, we now see a critical mass of consumers who are both turning their attention to healthcare and can afford it – either paying directly or via public and private insurance.

Industry in need of an overhaul

In the EM markets that we follow, we find Turkey has the most settled and mature public healthcare system. Georgia also has a well-thought-out system, but we think the government may need to introduce social security payments to help fund the state budget. Russia's and Romania's public healthcare systems are in greatest need of an overhaul, in our view, but we do not see this happening soon. The countries where we see the most interesting positive changes leading to an increase in healthcare spending (both public and private) are Saudi Arabia and Egypt – both are embarking on multi-year programmes to revamp their healthcare systems, which should provide strong tailwinds to private healthcare operators.

Generally supportive valuations

We look at Saudi healthcare companies using Bloomberg consensus estimates; on these metrics they appear to screen more expensively vs other peers in our sample, with the possible exception of Middle East Healthcare. However, these companies are in the midst of a capacity expansion cycle that could allow them to ramp up services significantly. The same process is driving a re-acceleration of growth for GHG, one of our favoured stocks. However, we find MPARK the most attractively valued stock under coverage; while it has 30% of debt on its balance sheet in FX, the overall low level of net debt/EBITDA, FX hedging and the derivation of certain revenue in FX makes us less concerned about Turkish lira depreciation. MD Medical Group (MDMG) in Russia is a 1.5-2-year investment story, in our view, that is seeing rapid, albeit revenue-dilutive, expansion into the Russian regions. Cleopatra Hospital Company (CHC) in Egypt is the leading private operator in a country embarking on an ambitious overhaul of and increase in healthcare spending; however, we find the stock relatively more highly valued vs other companies we cover. Romania's MedLife also operates in a country in need of a healthcare system overhaul – which we believe is not on the cards soon; the stock trades on relatively low multiples based on Bloomberg consensus.

Figure 1: Summary sector ratings and TPs

MD Medical Group	
Bloomberg	MDMG LI
Target price, $	10.7
Current price, $	6.9
Upside potential	55%
Rating	**BUY**

Georgia Healthcare Group	
Bloomberg	GHG LN
Target price, GBP	3.7
Current price, GBP	2.5
Upside potential	51%
Rating	**BUY**

MLP Saglik Hizmetleri	
Bloomberg	MPARK TI
Target price, TRY	18.10
Current price, TRY	10.76
Upside potential	68%
Rating	**BUY**

Lokman Hekim	
Bloomberg	LKMNH TI
Target price, TRY	6.80
Current price, TRY	4.94
Upside potential	38%
Rating	**BUY**

Cleopatra Hospital Company	
Bloomberg	CLHO EY
Target price, EGP	4.19
Current price, EGP	3.65
Upside potential	15%
Rating	**BUY**

Prices in this report are as of market close on 30 August 2018.
Source: Bloomberg, Renaissance Capital estimates

Contents

Investment summary

We find healthcare one of the more exciting investment areas in the near and medium term in EM, for the following reasons.

- We expect the industry globally to experience significant changes, driven by demographic (namely increasing lifespans) and technological changes. The former are putting even greater pressure on public healthcare systems, most of which suffer from underfunding, and governments are therefore looking for ways to overhaul these systems. The latter promise not only to make administering healthcare significantly cheaper, but also to change the ways in which healthcare is delivered – from diagnostics to surgeries, types of facilities and doctors required, frequency of patient visits etc.

- Specifically in EM, from our observations, consumer behaviour often follows a similar pattern as disposable incomes increase: the priority tends to be satisfying immediate consumer desires, from cars to designer clothes and white goods; this is followed by real estate and other investment goods; and finally comes focusing on own their health to better enjoy the very goods they have purchased. We believe healthcare is no longer a luxury available to only the few but is increasingly becoming a product demanded by the majority of EM consumers; the growing population wealth opens up additional avenues to fund healthcare.

These processes, on one hand, put pressure on governments to revamp their healthcare provision systems by increasing public budgets, seeking new ways to tax corporates and private individuals to enhance available funding, making disbursements more efficient and transparent and encouraging the participation of private healthcare providers. On the other hand, private healthcare providers look at consumers' increasing affordability and the desire to spend on their own healthcare, thus creating opportunities to expand via investing in modern equipment and attracting the best personnel.

In this report, we provide a detailed overview of a sample of EM/FM countries with at least one investable healthcare stock.

First, we conduct a cross-country comparative analysis to determine which countries in the sample offer more attractive opportunities purely from a top-down view – i.e. we look at countries: 1) where healthcare spending is on the rise; 2) where the structure of spending is changing; 3) which have (or may have in the future) more attractive industry structure and regulation; and 4) where investors may find stronger tailwinds for publicly listed companies.

Second, we look at the valuations of healthcare stocks we cover and also look at Bloomberg consensus data for stocks not under coverage, to assess their relative merits.

Country by country

Based on our analysis and emerging trends, we believe private sector healthcare companies (both listed and unlisted) are most likely to benefit in the following countries:

- We believe **Egypt** will see the biggest positive change to healthcare spending (among our sample of countries) over the next decade, through the introduction of Universal Healthcare Insurance (UHI). This should make healthcare more affordable to more people and the average ticket for covered benefits per patient should increase. Private healthcare providers eligible to participate in the government scheme are likely to benefit from growth of the overall pie available for healthcare. The relatively poor quality of the population's health is also likely

to provide growth opportunities for healthcare service providers, particularly in terms of preventive care.

On the negative side we see the following. 1) The introduction of the UHI will start in less populous administrative areas, where the presence of private healthcare providers is smallest, and will take a decade to be completed. 2) The private healthcare sector is fragmented, with only a few companies with sufficient bed capacity and scale of services capable of attracting a large inflow of patients.

- **Saudi Arabia** will likely see an acceleration in healthcare spending as it introduces a more comprehensive health insurance scheme, and will likely shift part of the burden of funding this to private individuals. The high affordability of healthcare services, supported by one of the highest levels of GDP per capita globally, provides an attractive backdrop for private healthcare providers to grow, in our view.

  On the negative side we see the following. 1) The low density of physicians and a high reliance on foreign professionals – against a backdrop of ongoing 'Saudisation' requirements – pose challenges for growth. Overcoming recruitment problems may lead to overspending on personnel, potentially affecting healthcare providers' margins. 2) The country is in effect still running two healthcare systems – public and private – with little overlap between them; in our view this makes the investment case for private players somewhat less attractive.

- Among our sample of countries, we believe **Turkey** has the most well-established and mature healthcare insurance system. While it is expensive for employers to provide healthcare insurance (based on the second-highest level of taxes on gross income per capita in our sample, according to Eurostat), the cover is comprehensive and the quality of public hospitals is relatively good.

  On the negative side, the more advanced the public healthcare system, the fewer opportunities it provides to the private sector. We believe the relatively high level of services and cover provided by public health insurance give private healthcare service providers less room to grow, compared with the other countries in our sample.

- We believe **Russia's** crumbling public infrastructure and deteriorating level of public healthcare services provide a strong backdrop for private healthcare providers to grow.

  On the negative side, the slow growth of the Russian economy (and hence Russian salaries) and the increasing need for privately funded healthcare expenditure limit the speed of private healthcare spending growth in the country. We also doubt that the government is willing to overhaul its current public system dramatically.

- **Georgia** has a well-established, growing and nearly entirely private healthcare services sector. The low level of doctor visits per capita overall and the slowly growing affordability of services provide a positive backdrop for growth, in our view. Healthcare tourism – now being developed – also has growth implications for the private sector, especially given Georgia's proximity to Russia and other CIS countries that lack quality healthcare services.

On the negative side, the overall affordability of healthcare remains low and growth of the government's UHI is likely to slow, potentially pushing people back into private insurance and out-of-pocket spending (unless the government introduces social/healthcare security payments by employers), possibly affecting healthcare spending growth.

- **Romania** has the lowest level of healthcare spending per capita among EU countries, poor quality of services, a shortage of specialised medical equipment, and a lack of state funding coupled with higher income per capita in future (6.2% 2017-2022E CAGR, according to Eurostat), which suggest to us a shift in healthcare spending towards the private sector.

  On the negative side, it has the lowest life expectancy among EU countries (around six years below the average EU level), low fertility rates, rising mortality and is seeing the emigration of qualified medical personnel; these factors pose challenges for private players.

From a macro viewpoint, we believe Egypt and Saudi Arabia offer the clearest paths to positive changes in public healthcare spending and offer the greatest upside potential to private operators. Russia's and Romania's governments are less likely to enact reforms to overhaul their crumbling public healthcare systems, in our view. However, any further deterioration in public services could support a shift towards higher spending on private healthcare providers, albeit subject to disposable incomes. Turkey and Georgia have the most mature – and thus least likely to change – public healthcare systems in our region, although Georgian public spending may have to be reduced in the future or complemented by the introduction of new taxes.

Stock by stock

We looked at individual companies listed in our sample of countries. The stocks we cover are MDMG in Russia, GHG in Georgia, MPARK and Lokman Hekim in Turkey and CHC in Egypt. We also perform a general stock-screen of companies that we do not cover, based on available consensus data; these are MedLife in Romania, and in Saudi Arabia Dallah Healthcare, Al Hammadi, Mouwasat, National Medical Care and Middle East Healthcare. We conclude the following:

- Not only does MPARK trade on what we view as most attractive multiples among our peer group, we also expect its growth to be among the fastest. The company was only listed in the beginning of the 2018 (prior to the subsequent significant Turkish lira depreciation). However, while it has FX debt on its balance sheet, this only comprises 30% of the total, and this is offset by some FX-denominated revenue; in addition, we forecast net debt/EBITDA to drop to 1.7x by YE18.

- GHG is another stock that we think screens well – especially on growth-adjusted multiples; the company has completed its investment programme and is re-accelerating growth by ramping up its newly commissioned capacities. The share overhang coming from the desire of Georgia Capital (GHG's main shareholder; BUY, TP GBP16.04, CP GBP10.17) to sell down has become less acute and relevant, in our view, as Georgia Capital declared recently that it was neither required by regulation to sell its GHG shares in the near future, nor was it planning to do so.

- Russia's MDMG runs a strong business, in our view, with the highest margins and RoE among our sample companies; however, having embarked on an ambitious programme of regional expansion, we think the company is likely initially to see a dilutive impact from the addition of less affluent regions to its revenue mix, slowing down growth and hence presenting an attractive entry point for value investors with an outlook over 18+ months, in our view.

- CHC in Egypt occupies the leading market position in a country that, we believe, will see positive changes to its healthcare spending. However, we find it relatively less attractively valued compared with other companies in our sample.

- Lokman Hekim (LH) has market cap of only $20mn, and while it boasts generally strong financials its outlook is inferior to that of MPARK, in our view.

Our views on Saudi healthcare stocks are based purely on Bloomberg consensus estimates.

- Judging by consensus estimates and expectations, Middle East Healthcare (MEH), screens among the cheaper stocks, with one of the highest RoEs, but the market also appears to expect it to grow relatively less rapidly. However, the company has been expanding aggressively over the past few years (negatively affecting EBITDA margins), and it may be that a potential re-acceleration of growth post its heavy investment is not yet being priced in by the market.

- National Medical Care is the process of merging or creating a JV with NMC Health, which, if it goes ahead, would create the largest private healthcare service provider in Saudi Arabia, despite retaining the government (through the Government Organisation of Social Insurance) as a key (but not controlling) shareholder. We believe the market may be waiting to see whether the deal goes ahead to arrive at a fair valuation for National Medical Care.

- Mouwasat has been one of the better-performing healthcare stocks in Saudi Arabia in recent years, on the back of prudent expansion and delivering strong financial results. However, the stock is trading close to its all-time highs and screens as the second most highly valued stock among listed Saudi healthcare providers.

- Both Al Hammadi and Dallah have been through an investment cycle which we believe is largely over. We think both could start to show improving financials from 2019. On Blomberg estimates, Dallah trades at more attractive multiples vs Al Hammadi.

Like many countries in our sample, Romania's healthcare system would benefit from an overhaul, but we doubt the government has any plans to do so soon. This presents a more challenging environment for MedLife, in our view. However, the stock has seen a significant de-rating YtD and screens relatively well on Bloomberg consensus numbers.

Among the companies we cover, we believe MPARK and GHG offer the best combination of value and growth.

Figure 2: Healthcare service relative valuation in $ terms (unless otherwise stated)

	Country	MktCap $mn	EV/EBITDA, x		P/E, x		EBITDA margin		EBITDA CAGR	EPS CAGR	RoE	
			2018E	2019E	2018E	2019E	2018E	2019E	2017-2020E	2017-2020E	2018E	2019E
Covered by RenCap												
Cleopatra Hospital Company*	Egypt	327	16.4	12.2	22.6	18.7	21.2%	22.3%	29.9%	53.5%	15.8%	17.4%
Georgia Healthcare Group*	Georgia	408	11.7	10.3	19.0	14.7	15.6%	15.8%	23.4%	12.6%	11.9%	13.2%
Lokman Hekim*	Turkey	19	7.0	5.8	13.7	19.2	13.3%	13.9%	27.9%	20.1%	13.6%	9.0%
MD Medical Group*	Russia	517	9.2	8.3	13.2	13.0	29.5%	29.6%	11.2%	4.0%	16.4%	16.0%
MLP Saglik Hizmetleri*	Turkey	344	7.7	6.1	nm	12.5	14.0%	14.9%	22.7%	nm	nm	22.8%
Average			**10.4**	**8.5**	**17.1**	**15.6**	**18.7%**	**19.3%**	**23.0%**	**22.6%**	**14.4%**	**15.7%**
Not covered												
Mouwasat Medical Services Co	Saudi Arabia	2,261	17.5	15.6	22.9	20.7	30.4%	29.3%	13.3%	12.1%	23.0%	22.5%
Al Hammadi Co for Development and Investment	Saudi Arabia	942	19.2	16.0	33.0	25.3	25.6%	25.4%	17.5%	22.5%	8.2%	11.0%
Dallah Healthcare Co	Saudi Arabia	1,159	14.5	12.1	22.0	16.3	27.1%	27.5%	13.1%	6.3%	9.5%	12.3%
National Medical Care	Saudi Arabia	596	11.4	10.0	21.7	18.6	22.3%	21.1%	13.1%	22.3%	12.3%	13.4%
Middle East Healthcare	Saudi Arabia	1,018	10.4	9.0	12.5	11.8	26.7%	24.0%	9.2%	3.6%	20.7%	18.6%
MedLife	Romania	155	9.8	8.0	29.6	17.8	12.3%	13.0%	21.8%	120.8%	10.4%	13.2%
Average			**13.8**	**11.8**	**23.6**	**18.4**	**24.1%**	**23.4%**	**14.7%**	**31.3%**	**14.0%**	**15.2%**
Other global peers												
China Resources	China	1,188	11.4	10.1	19.6	17.4	30.1%	31.9%	14.5%	8.8%	7.3%	7.8%
Aier Eye Hospital Group Co-A	China	11,062	40.8	32.4	73.8	55.6	23.2%	22.7%	32.7%	34.3%	17.2%	19.6%
Topchoice Medical Investme-A	China	2,596	40.3	32.0	60.5	46.5	29.0%	28.1%	28.0%	31.5%	23.8%	24.1%
Apollo Hospitals Enterprise	India	2,345	19.7	16.3	60.3	40.8	10.6%	11.3%	21.6%	67.5%	8.4%	11.4%
Dr Lal Pathlabs Ltd	India	1,229	27.3	23.0	42.5	35.1	25.2%	25.7%	18.1%	20.2%	23.5%	23.9%
Siloam International Hospitals	Indonesia	344	6.1	4.9	74.5	54.7	12.1%	12.7%	22.3%	14.5%	1.5%	1.8%
Mitra Keluarga Karyasehat T	Indonesia	1,808	27.8	24.9	40.3	36.2	33.2%	32.6%	10.9%	6.1%	16.5%	16.8%
IHH Healthcare Bhd	Malaysia	11,196	19.6	16.6	56.3	41.8	21.5%	22.5%	7.3%	13.6%	3.6%	4.7%
Mediclinic International Plc	South Africa	4,716	9.6	9.0	13.9	12.5	17.9%	18.1%	nm	nm	7.2%	7.8%
Life Healthcare Group	South Africa	2,645	8.6	8.0	17.9	15.4	24.1%	24.3%	9.3%	45.6%	13.7%	14.6%
NMC Health Plc	UAE	10,755	26.2	21.8	36.8	29.0	23.8%	24.2%	23.9%	34.7%	23.3%	23.0%
Netcare Ltd	South Africa	2,903	9.8	9.2	15.7	14.3	21.8%	19.9%	8.1%	nm	nm	nm
Global average			**16.6**	**14.0**	**32.8**	**25.6**	**22.2%**	**22.2%**	**18.2%**	**27.7%**	**13.7%**	**14.8%**

*Renaissance Capital estimates; all others based on Bloomberg consensus estimates.

Source: Bloomberg, Renaissance Capital estimates

Global backdrop

Global healthcare is changing, driven by technology, demographics and governments' desire to reduce the public cost of healthcare. While some healthcare challenges in the EM/FM world remain basic, technology and globalisation are accelerating the pace of changes worldwide and hence EM/FM countries are likely to be part of global trends sooner rather than later.

Healthcare costs globally have increased ahead of GDP growth in the past decade, according to the World Bank, driven predominantly by the inclusion of a greater proportion of the population, their growing demands from healthcare in terms of quality and cover, and rising life expectancy. Costs of healthcare provision are borne by public and private sources, but governments remain the largest source of funding of healthcare globally. Hence one of the main driving forces behind forthcoming changes in healthcare is governments' aim to cut the burden of healthcare costs on their budgets at a time when healthcare costs are running ahead of the growth of those very budgets.

The need to find a solution is exacerbated by growth in the non-economically active older population, whose healthcare requirements are far greater compared with the young productive population. With the growing share of those above pension age in the total population distribution, the need to reduce the costs of healthcare provision will only become more urgent.

Another driver of change is greater advances in technology, which promise not only better but cheaper healthcare. This plays well into governments' hands and there is broad support for development. Technological adoption by the healthcare industry ranges from more traditional R&D development of new treatments and drugs (increasingly employing non-traditional methods of big data analysis, artificial intelligence etc.) to gene engineering, robotics and the more widespread use of monitoring devices (e.g. wearables) utilising the internet 24/7.

These developments promise anything from having 'designer' babies with artificially adjusted genes, to living healthier and longer lives. Implanted smart devices can monitor every breath, suggest and prescribe specialised drugs and, if needed, send people to hospitals for robotic surgery. Many parts of the body that need to be replaced can be produced with new materials and 3-D printed on-site to exact measurements. What a life that promises to be! Long, if not infinite, healthy and productive…for those who want that.

Unsurprisingly, governments support these technological developments in anticipation of significantly lower healthcare costs, as preventive (and cheap) medicine based on personal monitoring reduces the need for expensive diagnostic, inpatient and rehabilitation treatments; these developments could also enable governments to collect higher taxes from healthy, productive populations working far beyond the current retirement age[1].

We leave a discussion of these dramatic changes to society made possible by medical advances for another time or rather another source[2]. Instead, we focus here on the likely near-term changes being brought about by technology that are affecting healthcare provision.

Our general conclusions in developed markets (DM) are as follows:

[1] Provided there are actually jobs for them as the robots replace humans…

[2] We recommend *Homo Deus* by Yuval Harari. One question the author attempts to answer is how do biotechnology and artificial intelligence threaten humanism? Directly linking those to the progress in healthcare technology.

- While the longer-term costs of healthcare may fall (as described above), the near-term costs will continue to rise (open any UK newspaper on any day of the week and you will find articles about the underfunded NHS(not just because it celebrated 70 years since the NHS was introduced)), and hence governments will continue to seek solutions – from introducing additional taxes to obliging employers to underwrite higher portions of the healthcare bill or diverting responsibility towards private sources.

- Technology will continue to change healthcare:

    - Telemedicine and remote healthcare are increasingly being adopted globally, with governments approving and licensing their providers; general practitioners (GPs) are utilising or morphing into Siri- and Alexa-type artificial intelligence (AI)-based home GPs; these are capable of covering 65%+ of consultations, according to the *Economist*.

    - Robotics, which have already replaced humans in conducting certain types of surgical procedures, will become even more widespread; the process of implementation is relatively more straightforward than seeking approvals for new treatments, for example, and hence is quick.

    - The use of wearables coupled with AI will continue to see rapid development, and their approval and path to market are also likely to be fast. However, their adoption is likely to hinge on the balance between those who are concerned about sharing personal data and those who accept the 'open nature' of today's world. This is further influenced by concerns about patients' own health and a likely push from insurance companies to adopt monitoring systems in exchange for reduced premiums.

    - Biotechnology of various forms will continue to develop quickly, but new drugs and treatments are likely to continue taking a relatively long time to be approved.

- Healthcare facilities are likely to change. There will be far less need for them in general. Many outpatient facilities are likely to cease to exist or will be combined with smaller and more agile inpatient facilities, which will also grow in number as the need for specialised surgeons on site diminishes[3]. It is likely that there will be more rehabilitation centres and facilities for long-term and elderly care.

In EMs and especially FMs, some of the challenges remain very basic – having healthcare of any sort in the first place. However, as has been the case in other industries (e.g. EM/FM telecom companies often deploy latest-generation technology faster than their DM peers, either due to the absence of legacy infrastructure, which means they can bypass intermediary solutions altogether, or because they have been chosen by vendors to test equipment etc.), it is also possible that EM/FM countries may leapfrog developments in healthcare in certain areas. For instance, telemedicine is likely to change the lives of many people in remote and rural areas. This year its use was licensed in Russia and will likely be licensed elsewhere, while in many countries no licensing is required. Of the above conclusions regarding DMs, we think most of them are relevant to EM/FM countries too:

- We think nearly all EM/FM countries in our sample are facing rising healthcare costs and will be altering their current systems over the next decade. We rate the countries in our sample in descending order – from those likely to change the

[3] The first global telesurgery took place 15 years ago when a surgeon in New York operated on a patient in France using a robot.

most to the least – as Egypt, Saudi Arabia, Russia, Georgia, Romania and Turkey.

- Technology will be adopted but at a slower pace than in DMs. First, little of their own technology is produced by the countries in our sample – technology is adopted after it becomes mainstream in DMs. Second, literacy levels, the availability of smartphones and openness to new technologies vary across our sample of countries, from e.g. a higher propensity of smartphone use in Saudi Arabia, Turkey and Russia to a lower propensity in Georgia and Egypt.

- Healthcare facilities may see two trends in parallel: a slower modernisation of facilities and services vs DMs in public healthcare and a rapid (possibly more rapid) development in private sector facilities, driven by growing affordability of healthcare and inclusion in government-funded schemes; the private sector is also likely to foster implementation of better equipment and technology.

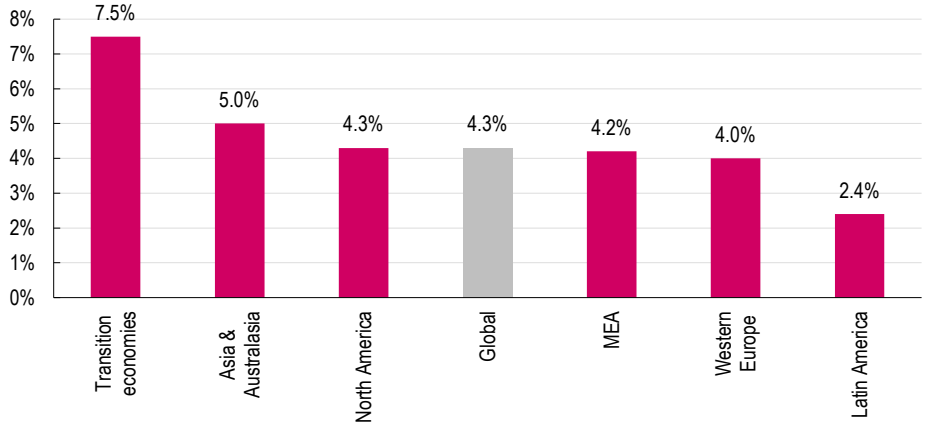
There could also be some possible side-effects:

- As DMs move towards wider machine involvement in healthcare, many healthcare professionals could find themselves without jobs and will possibly look for employment in the EM/FM world, bridging the gap between the absence of qualified personnel locally and the urgent need for them.

- There is intensifying competition for healthcare tourism; as remote medicine becomes more widespread, countries with the lowest cost base for rehabilitation care and the best logistics will attract an increasing number of healthcare tourists.

According to the Economic Intelligence Unit, global healthcare spending is expected to reach $8.7trn by 2020, vs $7trn in 2015, implying a 4.3% 2015-2020E CAGR, with the major part of the growth coming from developing (called 'transition' in the figure below) economies. Ageing and increasing populations, deepening market penetration and expansion, advances in medical treatments and rising living standards are likely to drive growth in healthcare spending.

Figure 3: Healthcare spending 2015-2020E CAGR, %

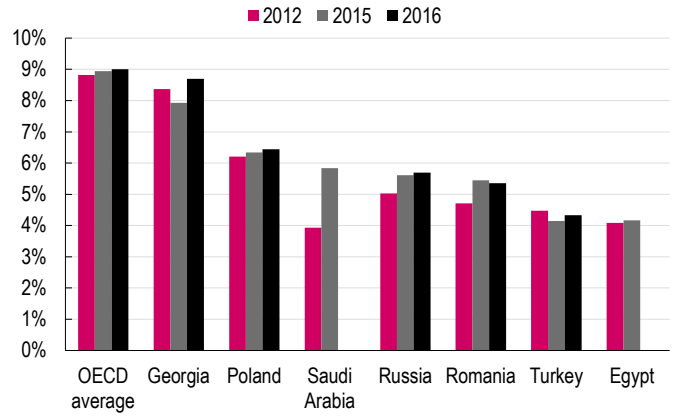


Source: World Industry Outlook, Healthcare and Pharmaceuticals, Economist Intelligence Unit

EM and FM spending on healthcare

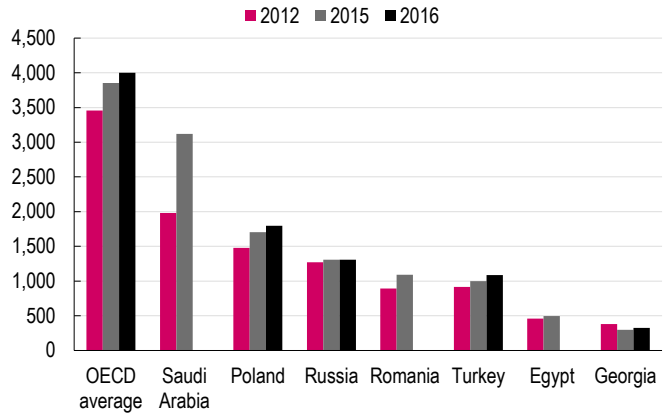
Among the EM and FM countries in our sample (we have focused on those with existing public companies offering investors exposure to the theme – Russia, Georgia, Turkey, Egypt, Saudi Arabia and Romania), Georgia's healthcare spending is the highest as a proportion of GDP – standing at twice the level of Turkey in 2016 (see Figure 4).

Figure 4: Healthcare spending for selected countries as % of GDP



Source: OECD, WHO, Frost & Sullivan

Figure 5: Current expenditure on health, per capita, $ purchasing power parities (current prices, current PPPs)

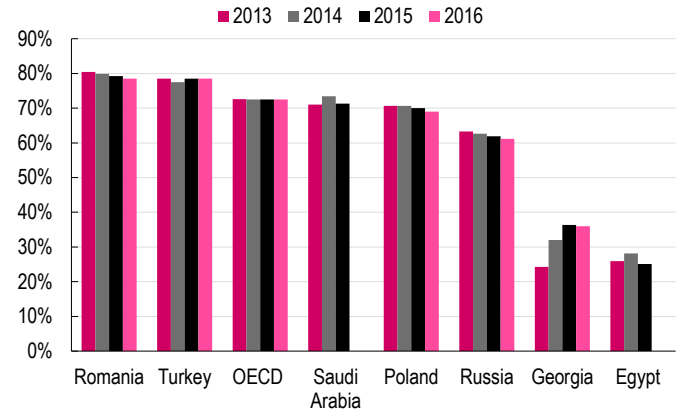


Source: OECD, WHO, Frost & Sullivan

However, Georgia is not an affluent country, with GDP per capita at c. 35% of Turkey/Russia and thus its absolute per-capita spending on healthcare is actually one of the lowest in our sample, which implies healthcare is one of the more unaffordable expenditures for the Georgian population. The amount of spending over the period between 2012 and 2015 grew least in Georgia, Russia and Egypt (reflecting a weakening of local FX rates) and fastest in Saudi Arabia (see Figure 5)

Even more important is the source of payment for healthcare. Here too, Georgia, together with Egypt, has the highest reliance on the private sector when it comes to healthcare payments. In fact, the role of the public sector (which reached 36% in 2016 in Georgia) has grown only in the past four years since the introduction of state-funded UHI in 2014. Egypt has only just adopted its own UHI scheme, which will be implemented gradually from 2018 to 2032 and likely lead to an increase in both overall spending on healthcare and spending by the state. Romania and Turkey are on the other end of the spectrum, with public spending playing the biggest role in overall healthcare expenditure, surpassing even the OECD average. *Ceteris paribus*, those countries also display the lowest share of private spending in total healthcare spending (see figures below).

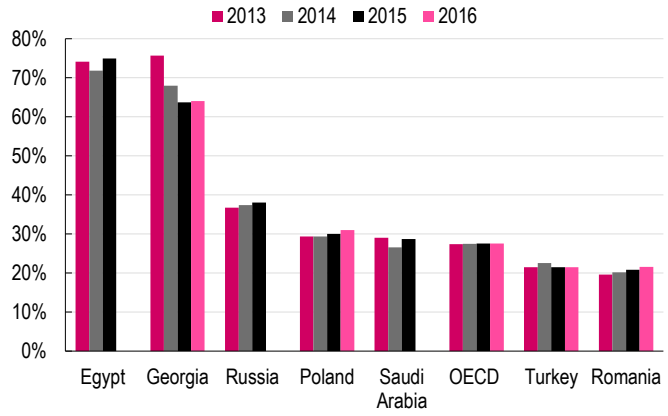
Figure 6: Share of public spending* as % of total healthcare expenditure (THCE)



*Public healthcare services consist of government financing arrangements (GFA) and compulsory health insurance (CHI).

Source: OECD, WHO, health ministries

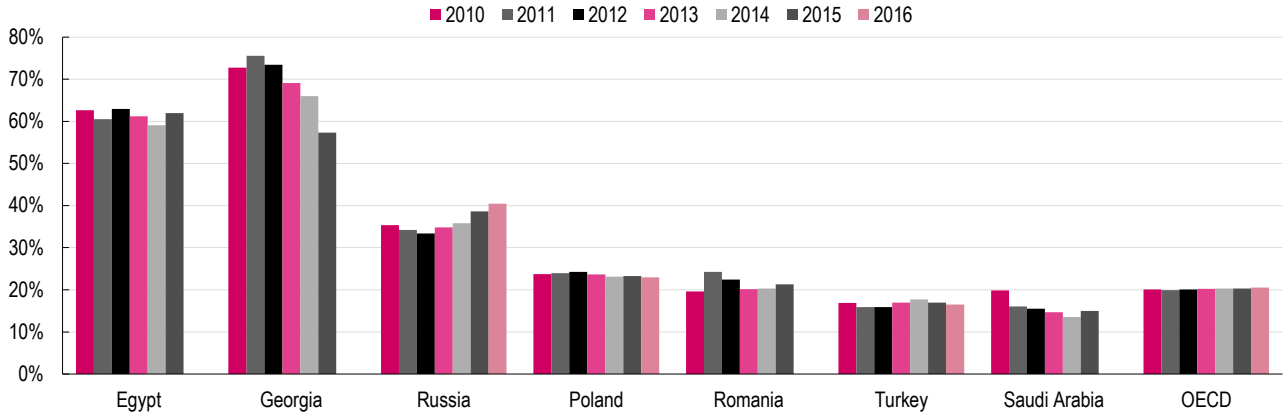
Figure 7: Share of private spending* as % of THCE



*Private healthcare services consist of legal commercial healthcare services (out-of-pocket), voluntary health insurance (VHI) and other financing arrangements.

Source: OECD, WHO, health ministries

Figure 8: Out-of-pocket healthcare expenditure, % of current expenditure on health



Source: WHO, OECD

The above picture, while being representative, needs to be 'adjusted' to take into consideration the following:

- Georgia has virtually no government-funded medical facilities (except for specialised mental and penitentiary clinics). Nearly all healthcare services are provided by the private sector. All other countries have parallel public and private medical care and hence the role of public funding in overall spending on healthcare ought to be higher in those countries.

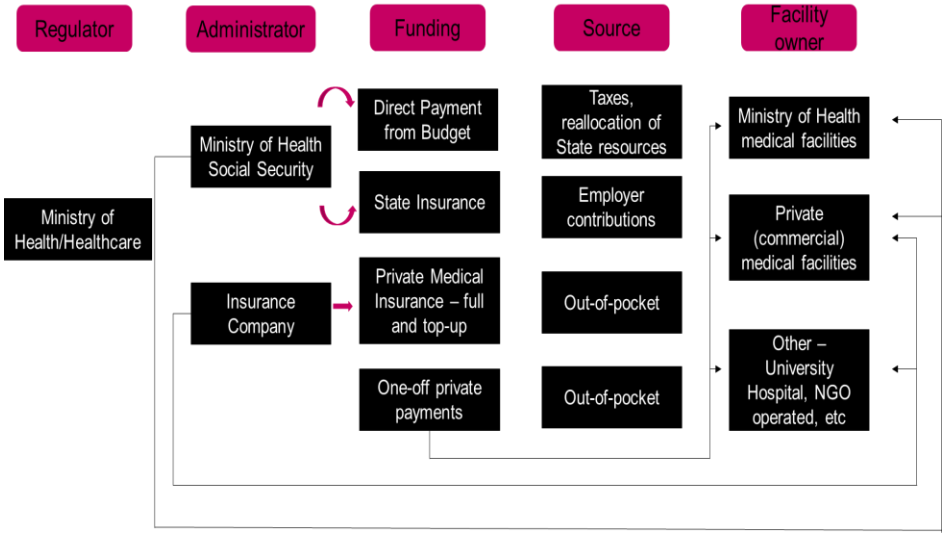
- The charts say little about the efficiency of spending. For example, Russia is notorious for its inefficient distribution of state funding[4]; so is Romania – which was ranked several times as having the worst healthcare system among the EU states, according to the OECD.

[4] The section *Medical facilities and human resources* (later in the report) points to some of the 'signs' of those inefficiencies, such as having the highest among the sample countries average length of stay and the number of discharges from hospitals: a typical 'over hospitalisation' and 'overly lengthy stay' in inpatient facilities characterising 'free' public services.

Structure, regulation, source of funding and pricing

In all of our sample countries the key regulator and administrator of healthcare services is the relevant Ministry of Health/Healthcare, which issues licences, sets qualification criteria for the provision of medical services and monitors the quality of public and private medical providers. These ministries typically own and operate public healthcare facilities, set prices for services provided by public healthcare facilities, administer their funding, monitor/control and sometimes establish ceilings for private service pricing. This is usually done by specific bodies – the Social Service Agency (Georgia), Health Insurance Organisation (Egypt) or Social Security Institute (SSI) in Turkey – also under the direct or indirect auspices of the Ministry of Health.

Figure 9: Healthcare industry structure



Source: Renaissance Capital

Public funding for healthcare comprises annual budget allocations, with the main source of funding being general and special taxes (e.g. in Egypt and Turkey a portion of tobacco tax is allocated to the healthcare budget), and social security contributions. However, country by country there are sizeable differences in sources of funding, leading us to conclude that some current schemes might not be sustainable in the future.

- **Georgia** has no social security or purposeful tax levied on employers. The government allocates funds for healthcare spending from general receipts of the budget. While Georgian public spending on healthcare is predominantly focused on funding the UHI fund (as there are only a few state-owned medical facilities in the country), the growth in disbursements from this fund over the past four years since the introduction of the UHI has been exceeding the country's GDP growth and takes a bigger allocation from the state budget – a situation we regard as unsustainable in the long term. The Georgian government curtailed spending in 2017 by introducing eligibility criteria for UHI (e.g. high income earners were excluded from UHI cover) and increased co-payments for certain procedures. We think that either the government will continue to increase private co-payments and/or would need to revert to new sources of funding such as introducing social security contributions by employers – especially as Georgia levies no profit tax and the burden on the employer is relatively low compared with other countries in our sample.

- **Turkey** has the highest social security tax rate (37.5% in total) among our sample countries and we think the current system is probably the most stable compared with other countries. 98% of the Turkish population is covered by the UHI scheme, which is funded mostly by social security contributions from salaries (7.5% paid by the employer and 5% by the employee) for salaried employees, with a cap of TRY10,000 (i.e. it becomes a flat amount for salaries above this level); social security contributions made by the self-employed, including those working in agriculture, at about TRY360 per head; and a portion of taxes on fuel and tobacco allocated to healthcare. The fund is used to provide universal cover and to finance opex and capex of public clinics. Private healthcare service providers can participate in the UHI scheme but the prices for their services (only those offered under the UHI scheme) are capped at 200% of the applicable price at public healthcare service providers.

- **Egypt** has one of the lowest proportions of public spending on healthcare and is at the start of a significant system overhaul. It will progressively introduce the new system at an estimated cost of c. EGP600bn from 2018 to 2032. The scheme will: 1) cover the entire population (i.e. it will be a UHI programme as opposed to the prior scheme of government healthcare cover provided to public sector employees and their families, as well as children); and 2) will entail a significant increase in social security contributions made by employers and employees (at 3% and 1% of salary, respectively), as opposed to a flat fee previously (at about one-tenth of the proposed level). In absolute terms, cost per capita will vary depending on salary levels between EGP1,300 and EGP4,000, compared with just EGP112 before (only 6% of those covered by this insurance policy actually utilised its services). Additional sources of funding are taxes on tobacco, which will partially be allocated to UHI, and other budget sources. This initiative implies that: 1) public spending on healthcare will increase over the next 10 years; and 2) overall spending on healthcare will increase, as we doubt that private spending will decline (i.e. be substituted by public spending); it will rather be used to enhance the level of treatments (and co-payment) by the population. As in Turkey, the funds should cover treatments as well as opex and capex of public clinics. Private healthcare providers are allowed to participle in the programme but prices for their services will be capped by the Social Healthcare Insurance Authority.

- **Russia** also relies on social security contributions made by employers into an obligatory healthcare insurance fund, but these are not matched by employees. Social security tax is 22% of salary in Russia but it serves mainly to provide for old-age, sickness, disability, death and other benefits, with only a portion funding healthcare – the common understanding is that 2-3% of salary or 10-15% of social security contributions are allocated to healthcare. The self-employed also pay a flat rate of c. RUB18,000 for the obligatory health insurance scheme. The government allocates some funding from other sources to fund healthcare expenditure. While we believe that the government will be forced to require employees to contribute payments to the system at some point, the entire public healthcare system is poorly structured, with many inefficiencies, suggesting an overhaul of the system is required.

- **Saudi Arabia** has been revamping its healthcare system over the past 15 years. At the moment, private individuals do not make any payments into a public healthcare system: the government funds the so-called mandatory health insurance (MHI) scheme for all public employees directly from the budget, while private companies are obliged to buy a so-called co-operative healthcare insurance (CHI) scheme for their employees based on employee salary (the maximum benefit of the insurance policy is SAR500,000). As Saudi Arabia is

only just beginning of its ambitious restructuring programme, the healthcare system is likely also to be significantly affected. First, as the government is planning many privatisations, private healthcare is likely to expand significantly (to reach 35% of total healthcare spending by 2020 – up from c. 26% in 2017, according to the government's Saudi Vision 2030 plan), and the government needs to fine-tune the pricing/reimbursement for private providers who would like to participate in public insurance schemes; second, we think, both MHI and CHI schemes will be complemented with co-payments by employees as well.

- The **Romanian** healthcare system is similar to Russia's and Turkey's in terms of a high reliance on social healthcare insurance. The social security contribution rate in Romania amounts to 37.25% of gross income but is mostly levied on employees (35%). Pensioners with income over EUR155/month must also contribute to the fund (5.5% insurance contribution). According to the UN, the share of the population over 60 years old will increase by c. 6 ppts during 2015-2030 in Romania, leading to the pensioner-to-worker ratio doubling from 30% to 60%, and overtaking the EU average by 2030. The Romanian labour force is projected to shrink by around one-sixth as a result of the country's low fertility rate (1.6 births per woman) and emigration. As a result, the current system of funding healthcare through insurance contributions from working Romanians is unsustainable, in our view. The state will need to raise funds through further taxes, push the burden more towards employers, increase co-payments and promote the use of voluntary health insurance (marginal at present).

Figure 10: Healthcare system of selected countries

Country	Regulator	Administrator	Insurance cover/reimbursement	Public asset ownership	Private providers	Private asset ownership
Russia	**Ministry of Health** Issues licences, sets eligibility criteria, monitors quality etc	**Russian Healthcare Fund** ▪ No clarity of setting prices for public healthcare ▪ Different prices for same services provided by public healthcare clinics	**Mandatory Health Insurance (MHI)** ▪ 100% of Russian citizens eligible ▪ Broad medical coverage but patients endure long waiting times in case of complex treatment ▪ Relatively poor service quality funded mostly through social security taxes (2-3% paid by employer with a portion attributed to healthcare) and direct budget transfers	90% of hospital capacity	**Numerous private providers** ▪ Set own prices but can work also with MHI (cannot charge above MHI price) ▪ Subcategory of private insurance is Voluntary Health Insurance (VHI) provided by employers to employees but typically via a contract with one or several 'approved' healthcare organisations: a bit similar to top-up insurance - c.6% of the total market	10% of hospitals capacity
Turkey	**Ministry of Health** Issues licences, sets eligibility criteria, monitors quality etc	**Social Security Institute (SSI)** ▪ SSI sets standardised health operations price lists (so-called SUT prices) ▪ Same prices for all hospitals ▪ SUT prices for inpatient services were recently increased but change infrequently	**Universal Health Insurance (UHI) scheme** ▪ 98% of population is covered ▪ SSI coverage is very extensive vs other DMs ▪ Relatively good service quality ▪ Funded mostly through employer and employee contribution (12.5% from income)	63% of all hospitals and 79% of bed capacity	**Numerous private providers** ▪ Can set own tariffs but up to 200% of the regulated SUT prices for providers working with SSI ▪ On top of SSI coverage complementary health insurance covers inpatient services that are not fully covered by SSI and outpatient co-payments ▪ Providers that not involved in SSI can set own prices for services	37% of all hospitals and 21% of bed capacity
Egypt	**Ministry of Health** Issues licences, sets eligibility criteria, monitors quality etc	**The Health Insurance Organization (HIO) and Curative Care Organisation (CCO)** ▪ No clarity of setting prices for public healthcare (prices can fluctuate according to hospitals' quality, doctors' qualifications etc.)	**Universal Health Insurance (UHI)** ▪ Gradual introduction from July 2018 to 2032 ▪ Funded by a 3% employer and 1% employee contributions from salary (cost per capita will go up from EGP112 to EGP1,300-4,000 depending on salary) and by taxes on tobacco, motor vehicles etc ▪ Relatively poor quality of public healthcare	32% of all hospitals and 75% of bed capacity	**Numerous private providers** ▪ Set own prices but those who choose to participate in UHI scheme, will be subject to public prices ▪ Low penetration of private insurance	68% of hospitals and 25% of bed capacity

Figure 10: Healthcare system of selected countries (continued)

Country	Regulator	Administrator	Insurance cover/reimbursement	Public asset ownership	Private providers	Private asset ownership
Georgia	**Ministry of Health** Issues licences, sets eligibility criteria, monitors quality etc	**Social Service Agency (under the same ministry)** Funded through direct budget allocations (taxes etc); there are no purposeful social security allocations	**United Healthcare Fund (UHC)** ▪ 10-15% of population has full cover; estimated another 10-15% have top-ups; covers 85-90% of eligible population (those with salaries of less than GEL40k pa), basic outpatient services based on capitation method; covers up to 70% of specialist visits based on capitation method; emergency services with GEL15k limit per incident and elective inpatient services with annual limit of GEL15k per person	10% of bed capacity; -Only specialised clinics (mental, tuberculosis, penitentiary)	**Numerous private providers** ▪ Receive reimbursement from UHC within set limits (capitation or incident based) ▪ Moderate penetration of private insurance	90% of bed capacity; -All of the non-specialised inpatient and outpatient facilities
Saudi Arabia	**Ministry of Health** Provide care on free basis for Saudis and public-sector expatriates; others - for fee	**Ministry of Health/ Cooperative Health Insurance Fund** Funded by government budget / funded by employer	▪ Comprehensive package of benefits including, public health, preventive, diagnostic, and curative services and pharmaceuticals with few exclusions and no cost sharing ▪ 38% of the Kingdom's population have been covered by the CHI	68% of hospitals and 75% of bed capacity	**Numerous private providers** Employers have to buy the policy from an insurance company. The health insurance premium determined by the agreement between an insurance company and the employer. Maximum benefit limited by SAR500k	32% of hospitals and 25% of bed capacity
Romania	**Ministry of Health** Issues licences, sets eligibility criteria, monitors quality etc	**National Healthcare Insurance Fund (NHIF)** Pays for healthcare services and drugs	**Social Health Insurance system (compulsory for all citizens)** ▪ Total social security contribution rate is 37.25% from gross income (employee social security contribution rate is 35%) pensioners with income over EUR155/month (5.5% insurance contribution)	n/a	**Numerous private providers** Private providers are allowed to operate under SHI system and can charge on top of the amount reimbursed. This applies only to secondary health care (ambulatory and inpatient) and not to primary health care. In 2013, extra billing for superior hospital accommodation was capped at LEI300 per day (less than EUR70) with no explicit justification	n/a

Source: Ministries

The prices for services offered by private providers are typically freely set in every country in our sample. Private service providers who would like to participate in government healthcare insurance schemes (allowed in Romania, Georgia, Turkey, Russia and Egypt under the new scheme) typically request a co-payment whose amount is either capped (Turkey), pre-negotiated with private insurance providers (Russia, Georgia and Egypt) or paid out-of-pocket. Romania caps the prices for certain treatments and procedures even for the public healthcare providers who then request a private co-payment. In Saudi Arabia private and public systems are run in parallel.

Georgia is one of the exceptions when it comes to the formation of healthcare service prices as it went through the process of almost entire healthcare sector privatisation (except for specialised mental, penitentiary institutions) and dismantling of the old Soviet system before introducing UHI cover. In doing so, Georgia had to rely on the pricing prevailing in private healthcare. For inpatient and specialist treatments, the government collected a representative sample of prices for each service across clinics, took an average and set its reimbursement limits equalling the average (in some cases) or in the lower quartile (for other cases) of the sample, thus creating a benchmark that was not far off the prices offered by private clinics.

For outpatient visits in Georgia, the government has set a per-capita reimbursement scheme – i.e. for each patient (patients register with a GP and have to stay with the selected one) the state reimburses GPs based on a fee per registered patient, irrespective of the number of patient visits. Russia and Romania run a referral system and patients are allocated to the nearest outpatient facility based on their residential address. Turkey runs a non-referral system where patients have the freedom to choose the healthcare facility of their choice from outpatient to inpatient services. Egypt also does not have a proper referral system but rather several pilot referral programmes.

In contrast to Georgia, other countries have retained large public sectors where prices are typically significantly below those in the private sector. These countries have private healthcare providers setting their own tariffs, with the government allowing the private sector to participate in the government insurance scheme. The amount of co-pay premiums is either unregulated or capped, as it is in Turkey (the co-payment amount cannot exceed 200% of the price paid by SSI for the relevant treatment) and possibly, in the future, in Egypt, where the government has just started to introduce the new healthcare system. However, even for countries with unregulated prices, private insurance companies providing co-payments usually pre-negotiate rates with private healthcare service providers.

The Saudi Arabian and Russian public healthcare systems are unique as they do not set an explicit price per service. In these countries[5] the government guarantees all services free of charge to their citizens and sets salaries for healthcare personnel irrespective of the type, quality or complexity of the services rendered. The essence of the system is very simple: the government creates an annual healthcare budget from direct allocations (in Russia also funding it through the obligatory medical insurance payment paid by employers) and then allocates funding on capex and opex of public healthcare facilities, where opex includes personnel salaries. Interestingly, there is also no single reimbursement price for services – the same service offered by different public healthcare facilities may receive different reimbursement from the state.

In Russia the inefficient and non-transparent public healthcare system creates a fertile basis for so-called ‘grey’ payments (one could also call them tips or ‘surcharges from grateful patients’) especially for more specialised services. ‘Grey’ schemes account for an estimated 25% (according to Businesstat) of Russia’s private spending on healthcare (only applicable to services rendered by public providers). The obligatory health insurance in Russia is the main source of cover for public healthcare, but even the administrators of

[5] In Russia, the system is a direct continuation of the Soviet healthcare system.

the system admit there is no methodology for settling prices for services and some services may be provided at below their actual costs.

Private clinics are free to set their own prices. Because these tend to differ substantially, many private insurance schemes in Russia limit the use of their insurance to specific healthcare clinics in addition to defining caps on the reimbursement level. In Saudi Arabia, private employers are obliged to fund medical insurance for employees and prices are agreed between the insurance company and employer. The maximum benefit is capped at SAR500,000. In Russia, unlike in Saudi Arabia, private healthcare providers can participate to a limited extent in the government healthcare insurance scheme, but the level of cover is typically very low, leaving the bulk to out-of-pocket co-payments. In Saudi Arabia, the public and private systems have not overlapped to date.

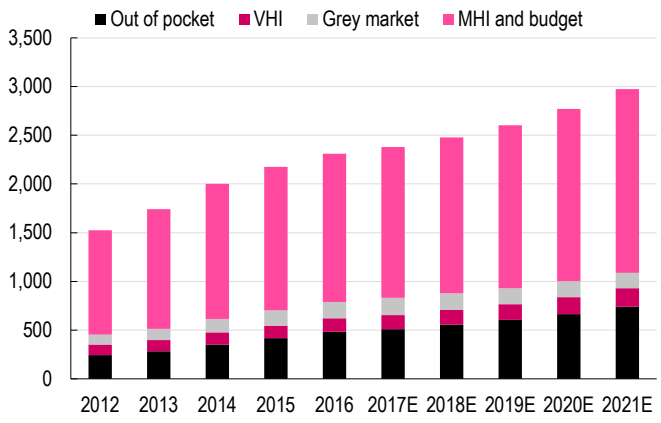
We make the following conclusions:

- The role of private spending in total healthcare spending will grow over the next decade for all countries.
- The share of private insurance will increase as a proportion of private spending, overtaking the pure out-of-pocket expenses in the next decade.
- Saudi Arabia and Russia are likely to see biggest increases in private spending on healthcare among our sample countries.
- Turkey currently has the most well-established and mature healthcare system among our sample countries.
- Georgia, Romania and Egypt are the countries where adjustments to the existing system[6] of public spending are most likely in the next 5-10 years.
- Russia needs a more thorough revamp of its entire healthcare system to change the barely overlapping nature of public and private healthcare, but we doubt such changes will be likely over the next five years.

[6] In Egypt we refer to the new healthcare system gradually introduced through 2032.

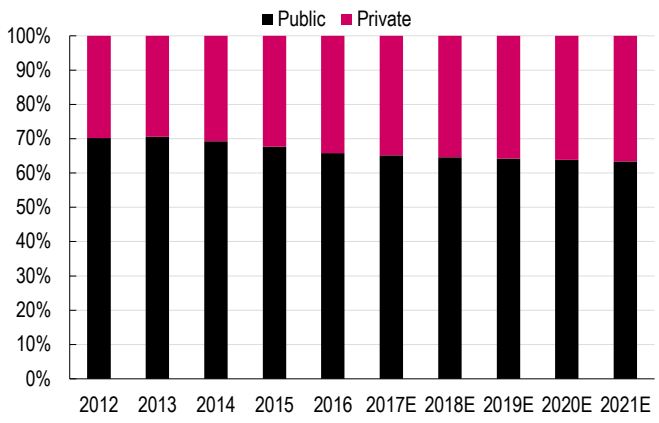
Russian healthcare in charts

Figure 11: Total Russian healthcare market breakdown, RUBbn



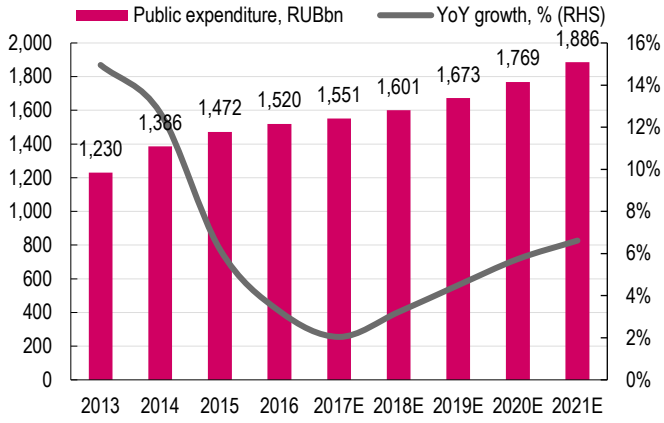
Source: BusinesStat

Figure 12: Public vs private healthcare spending in Russia



Source: BusinesStat

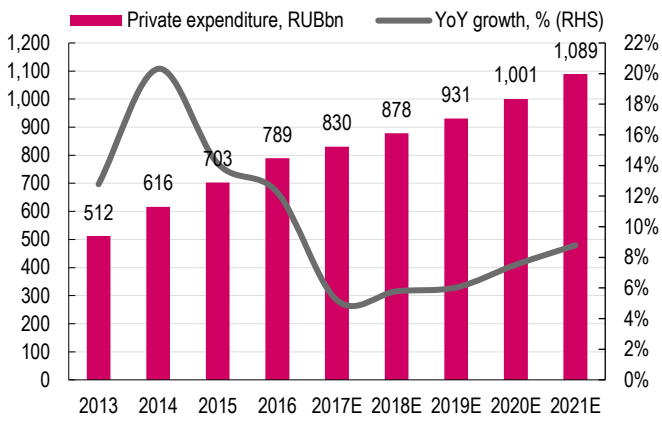
Figure 13: Public sector healthcare expenditure dynamics in Russia



Note: Incl. MHI and budget.

Source: BusinesStat

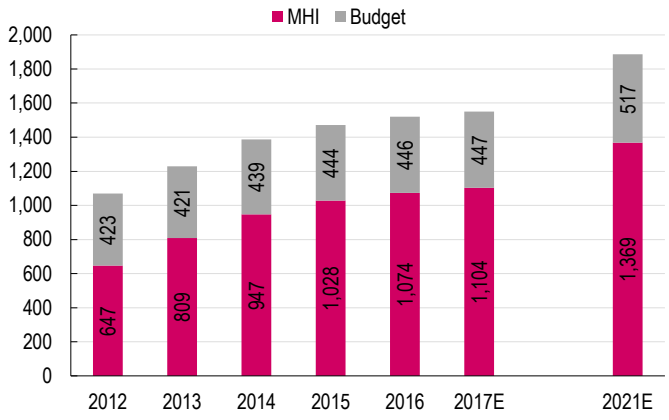
Figure 14: Private sector healthcare expenditure dynamics in Russia



Note: Incl. Out-of-pocket (OOP), VHI and grey market.

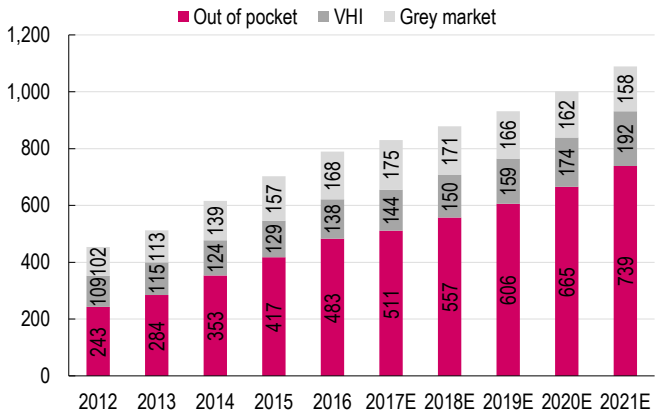
Source: BusinesStat

Figure 15: Total Russian public healthcare expenditure breakdown, RUBbn



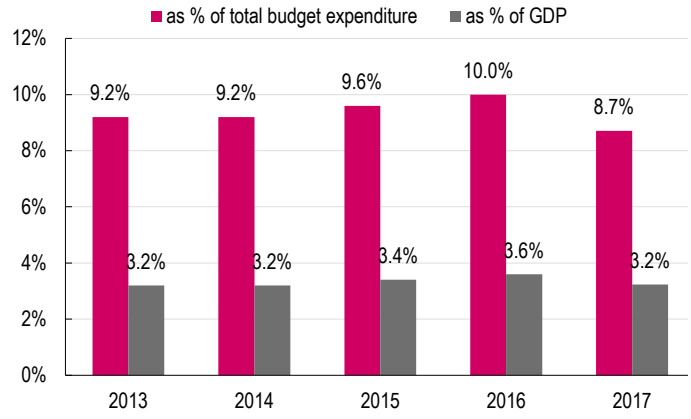
Source: BusinesStat

Figure 16: Total Russian private healthcare expenditure breakdown, RUBbn



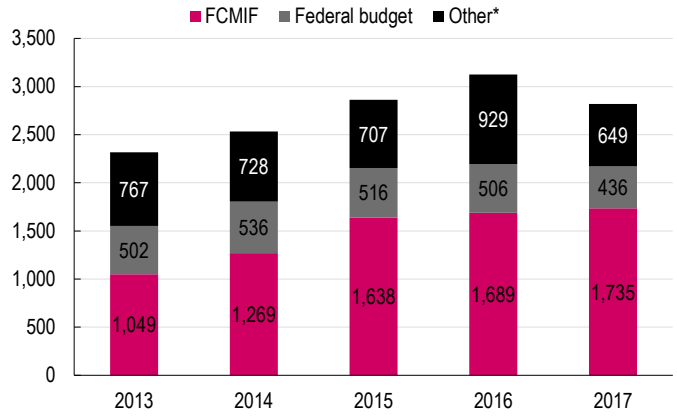
Source: BusinesStat

Figure 17: Consolidated budget expenditure on healthcare as % of total state budget and as % of GDP in Russia



Source: Ministry of Finance, Rosstat

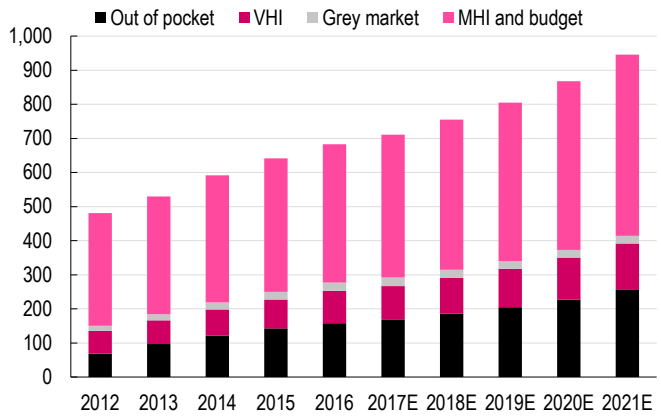
Figure 18: Structure of the Russian consolidated budget expenditure on healthcare, RUBbn



Note: *incl. regional budgets

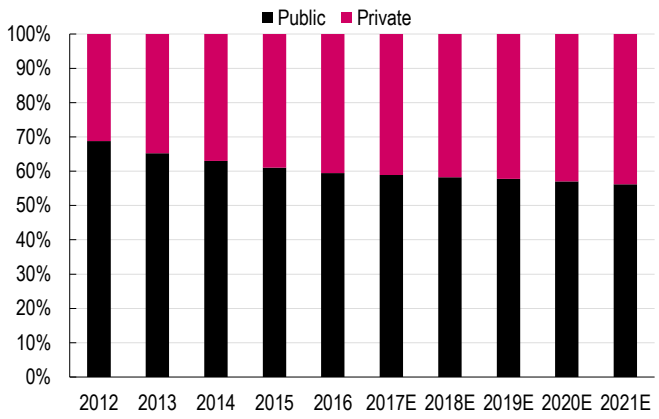
Source: Ministry of Finance

Figure 19: Total Moscow healthcare market breakdown, RUBbn



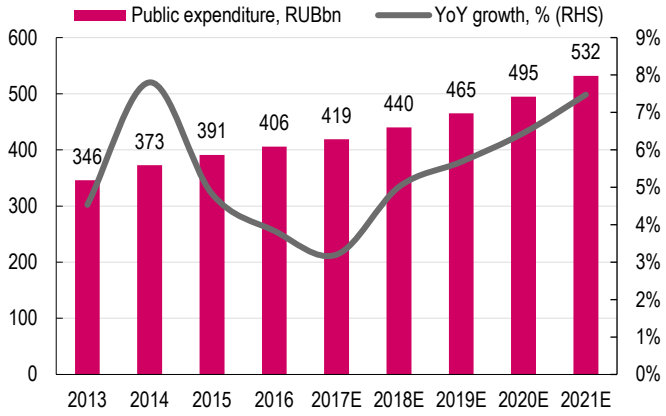
Source: BusinesStat

Figure 20: Public vs private healthcare spending in Moscow, %



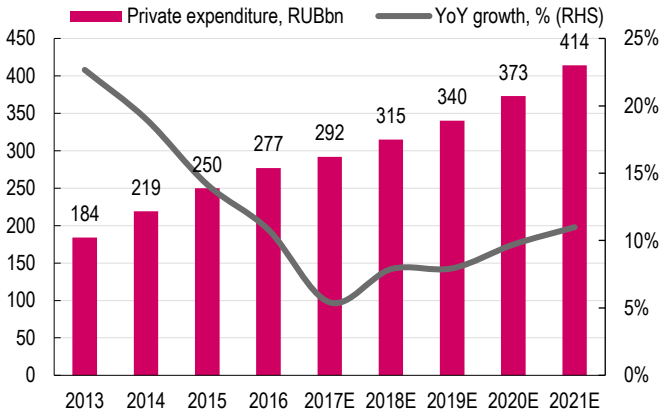
Source: BusinesStat

Figure 21: Public sector healthcare expenditure dynamics in Moscow



Source: BusinesStat

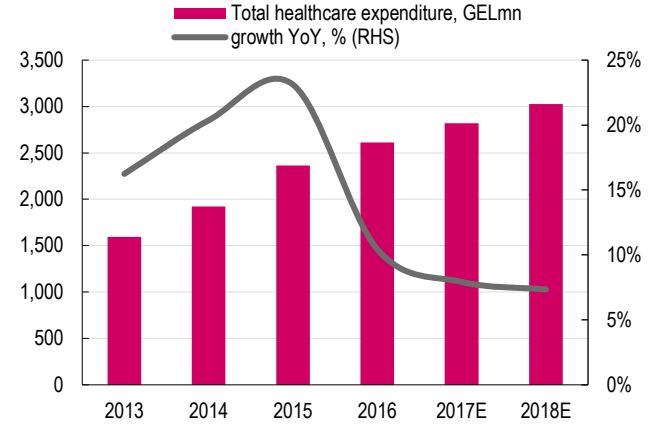
Figure 22: Private sector healthcare expenditure dynamics in Moscow



Source: BusinesStat

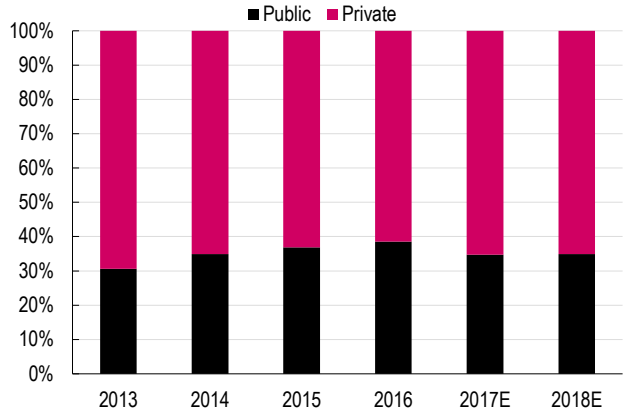
Georgian healthcare in charts

Figure 23: Total healthcare expenditure dynamics in Georgia



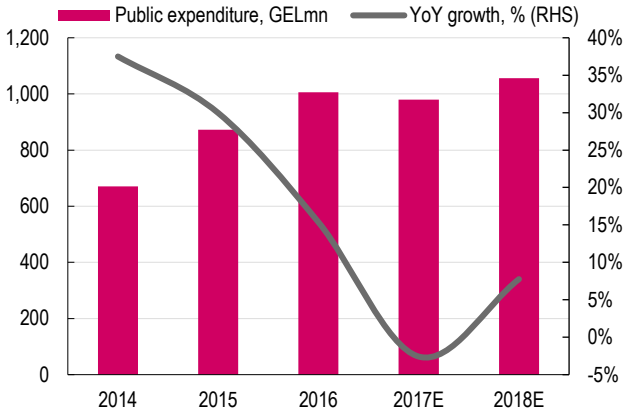
Source: Frost & Sullivan, WHO

Figure 24: Public vs private healthcare spending in Georgia, %



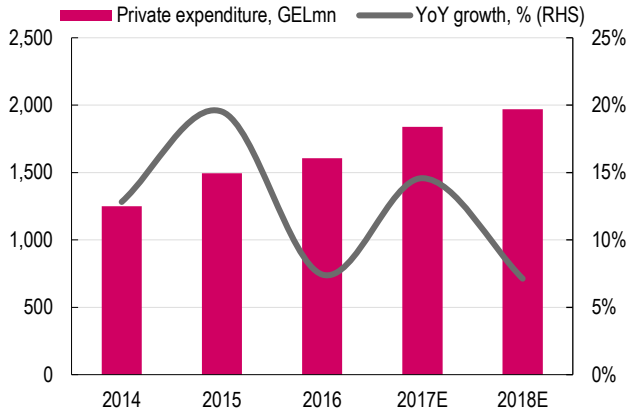
Source: Frost & Sullivan, WHO

Figure 25: Public sector healthcare expenditure dynamics in Georgia



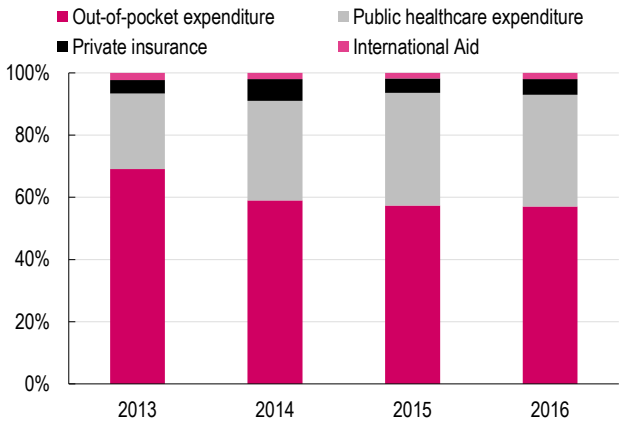
Source: Frost & Sullivan, WHO

Figure 26: Private sector healthcare expenditure dynamics in Georgia



Source: Frost & Sullivan, WHO

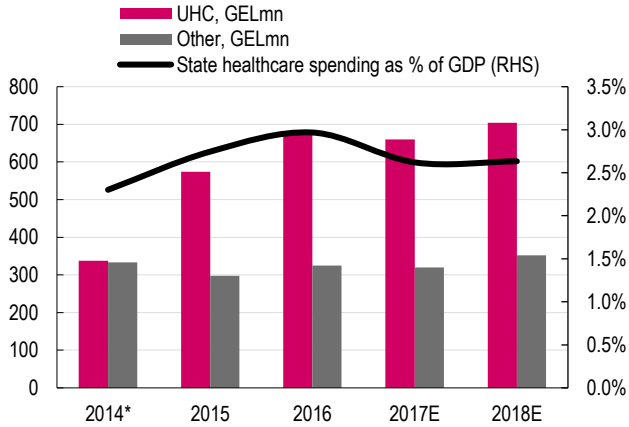
Figure 27: Total healthcare spending in Georgia breakdown, %



Note: Public expenditure includes UHC programme and other government spending.

Source: NCDC, Frost & Sullivan

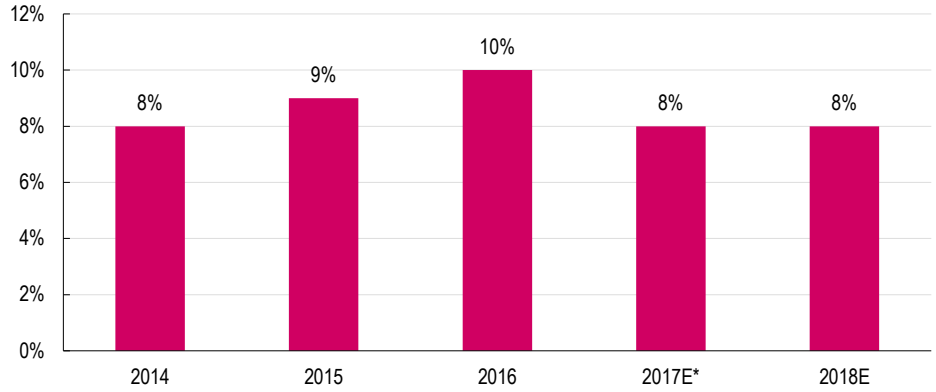
Figure 28: Public healthcare spending in Georgia breakdown



Note: Other spending includes SIP.

Source: Ministry of finance, Geostat

Figure 29: Public healthcare spending as % of total state budget in Georgia

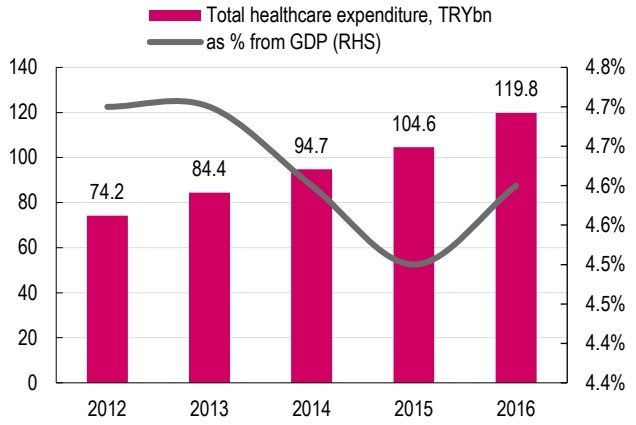


*Government expects it to grow in line with GDP after 2017; we doubt that.

Source: Ministry of Finance, Geostat

Turkish healthcare in charts

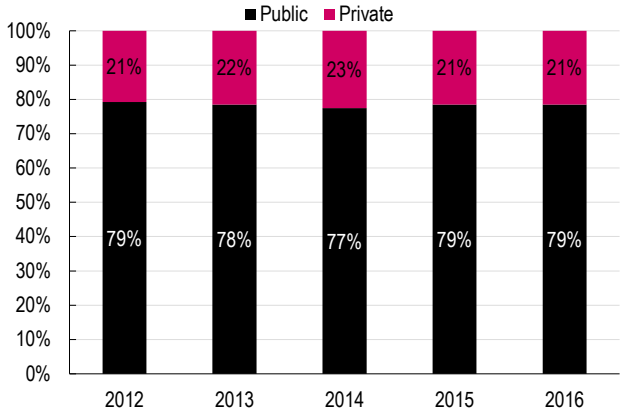
Figure 30: Total healthcare expenditure in Turkey as % of GDP



Note: Incl. investments.

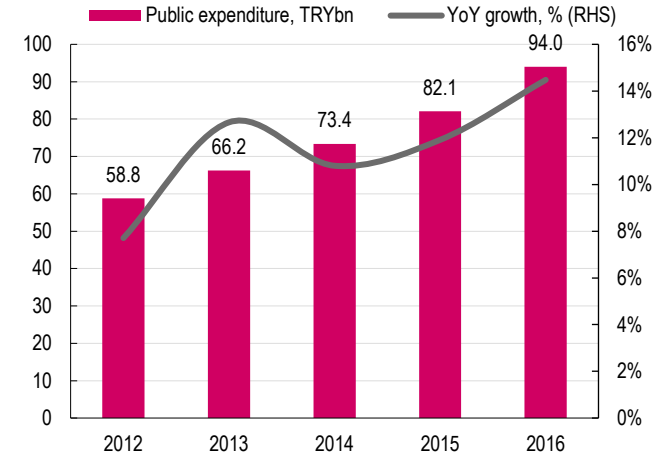
Source: Turkstat

Figure 31: Public vs private healthcare spending in Turkey



Source: Turkstat

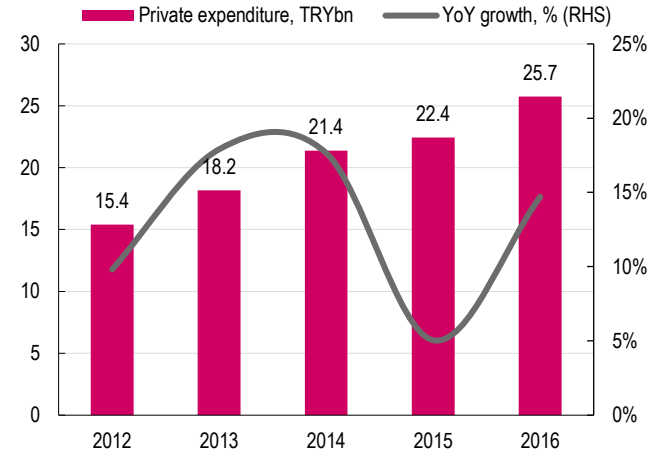
Figure 32: Public sector healthcare expenditure dynamics in Turkey



Note: Incl. government expenditure and social security insurance.

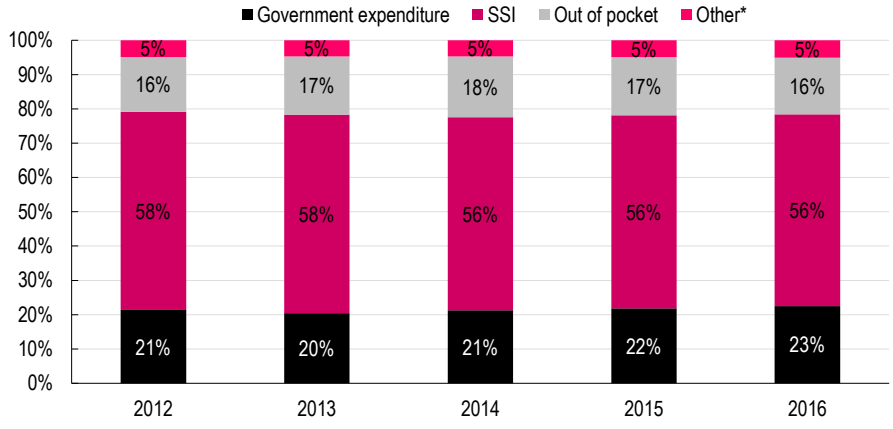
Source: Turkstat

Figure 33: Private sector healthcare expenditure dynamics in Turkey



Source: Turkstat

Figure 34: Current healthcare spending in Turkey breakdown

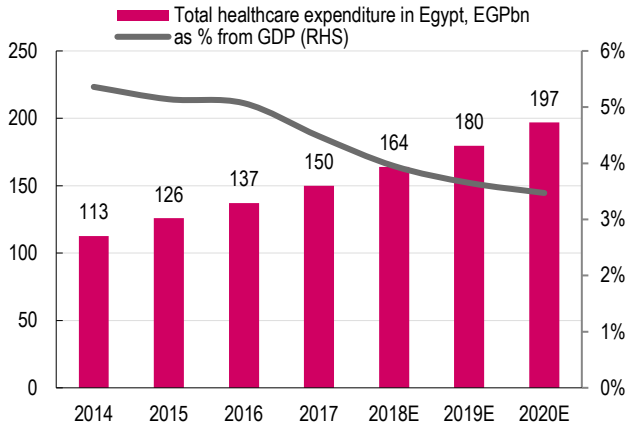


Note: Incl. VHI; ex. investments.

Source: Turkstat

Egyptian healthcare in charts

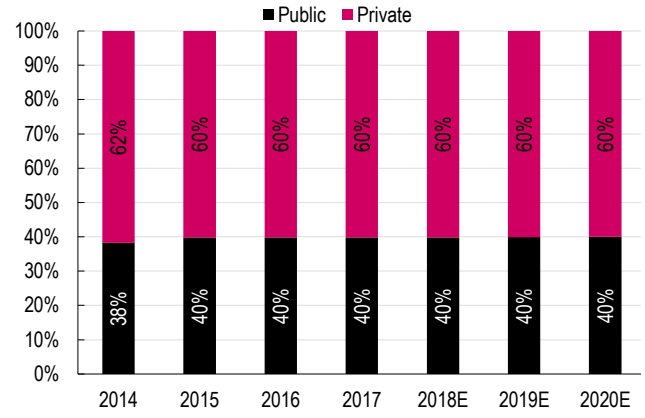
Figure 35: Total healthcare expenditure in Egypt as % of GDP



Note: Incl. investments.

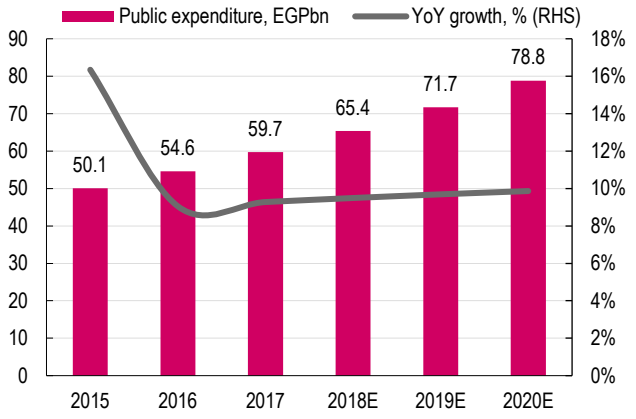
Source: BMI

Figure 36: Public vs private healthcare spending in Egypt



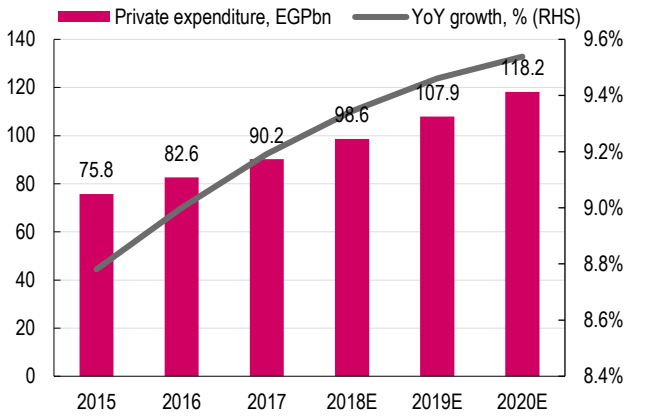
Source: BMI

Figure 37: Public sector healthcare expenditure dynamics in Egypt



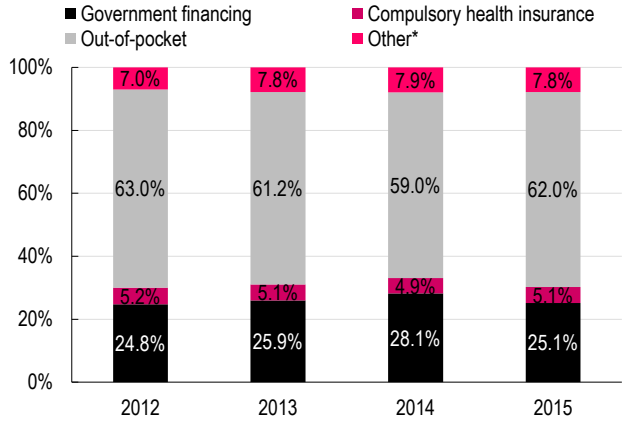
Source: BMI

Figure 38: Private sector healthcare expenditure dynamics in Egypt



Source: BMI

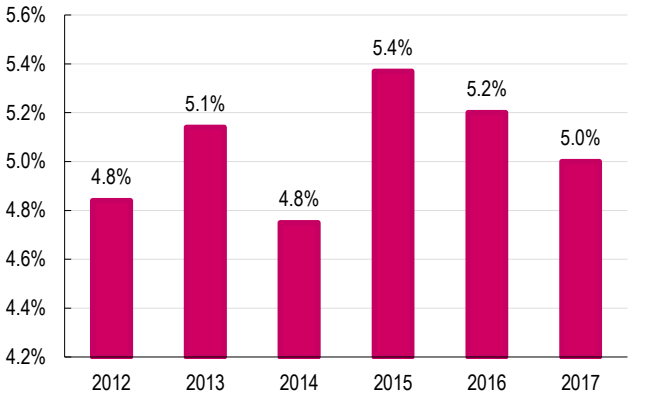
Figure 39: Current healthcare spending in Egypt breakdown



Note: Incl. VHI; ex. investments.

Source: WHO

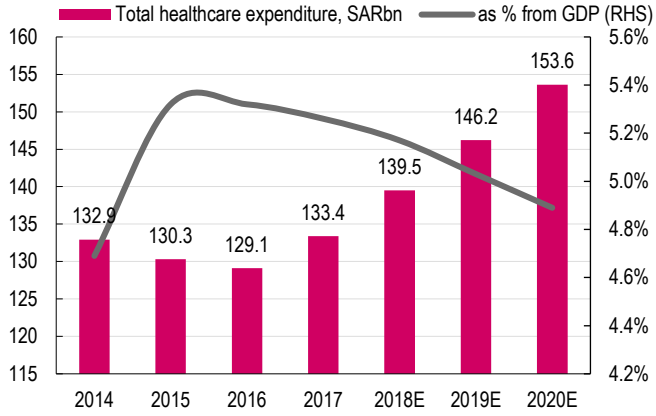
Figure 40: Public healthcare expenditure in Egypt as % of total state budget



Source: Ministry of health

Saudi Arabian healthcare in charts

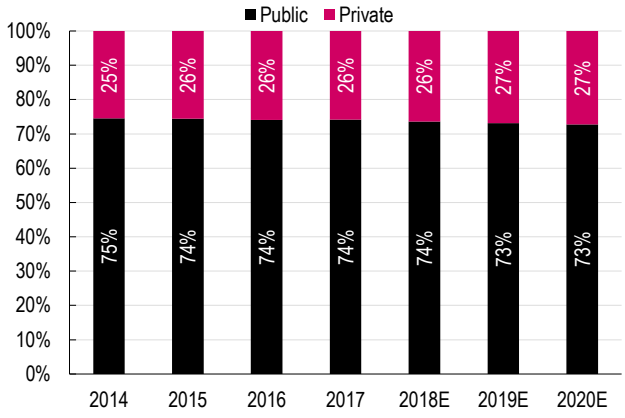
Figure 41: Total healthcare expenditure in Saudi Arabia as % of GDP



Note: Incl. investments.

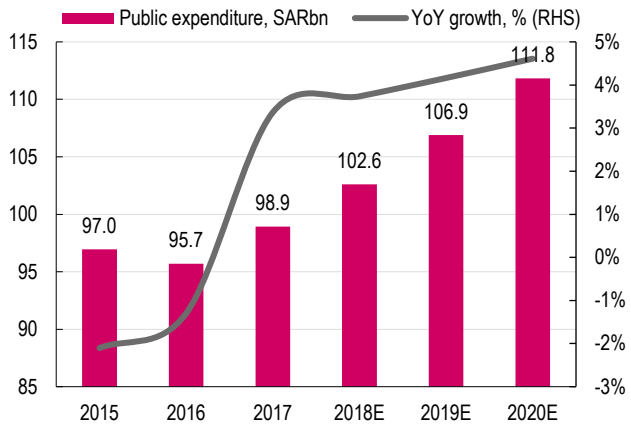
Source: BMI

Figure 42: Public vs private healthcare spending in Saudi Arabia



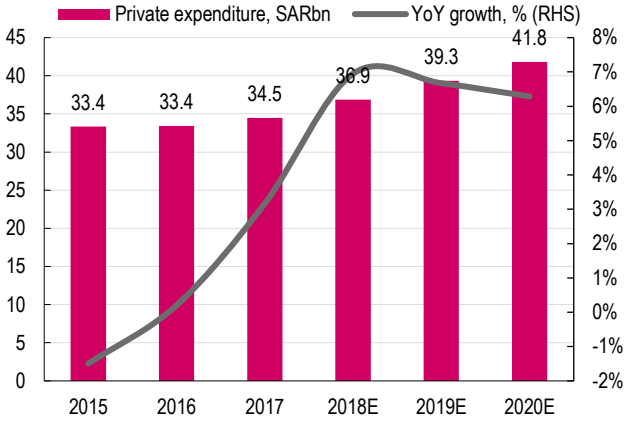
Source: BMI

Figure 43: Public sector healthcare expenditure dynamics in Saudi Arabia



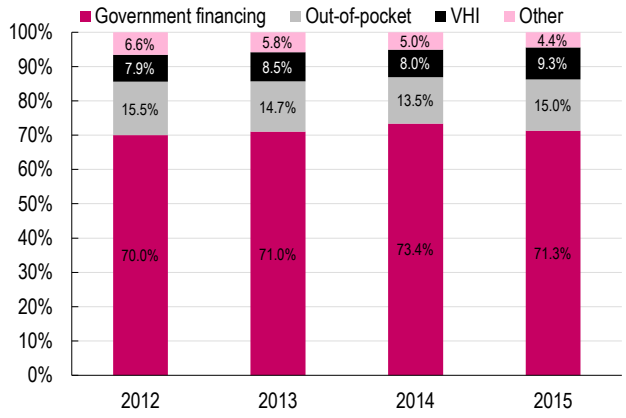
Source: BMI

Figure 44: Private sector healthcare expenditure dynamics in Saudi Arabia



Source: BMI

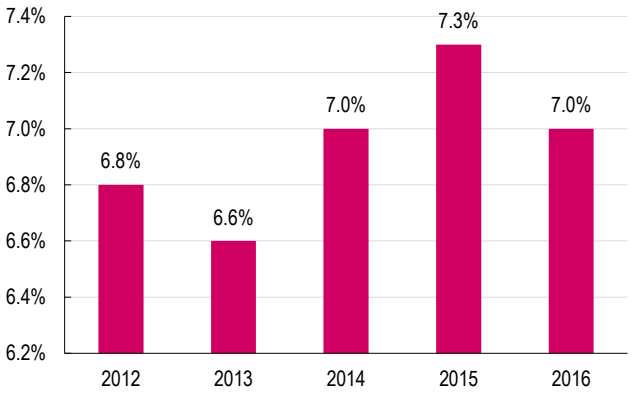
Figure 45: Current healthcare spending in Saudi Arabia breakdown



Note: Ex. investments.

Source: WHO

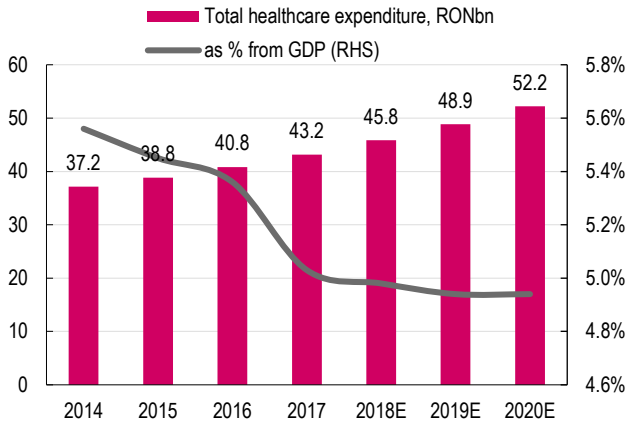
Figure 46: Public healthcare expenditure in Saudi Arabia as % of total state budget



Source: Ministry of Health

Romanian healthcare in charts

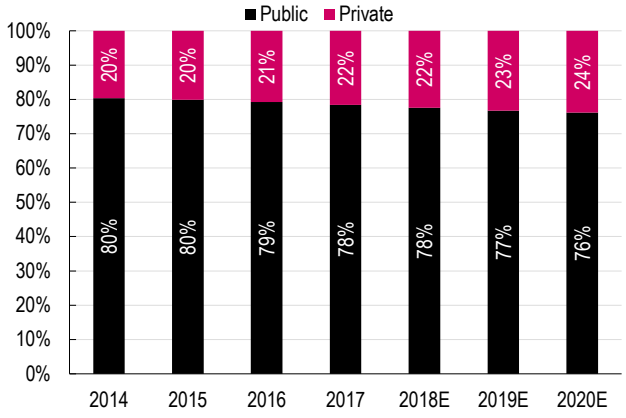
Figure 47: Total healthcare expenditure in Romania as % of GDP



Note: Incl. investments.

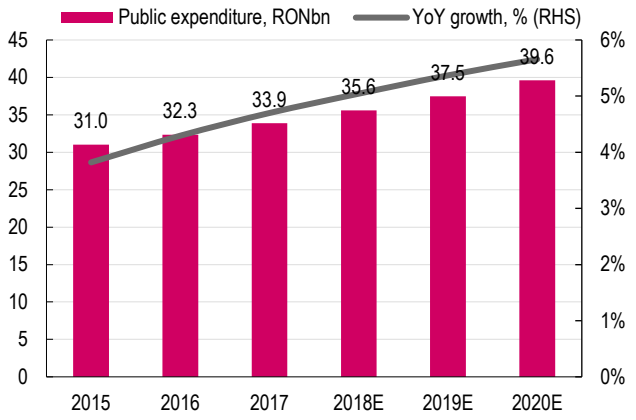
Source: BMI, WHO

Figure 48: Public vs private healthcare spending in Romania



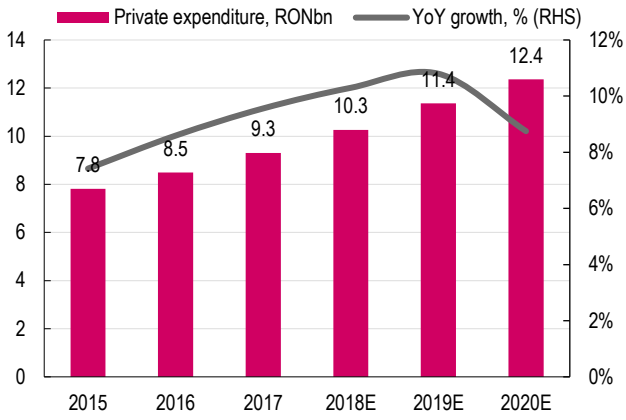
Source: BMI, WHO

Figure 49: Public sector healthcare expenditure dynamics in Romania



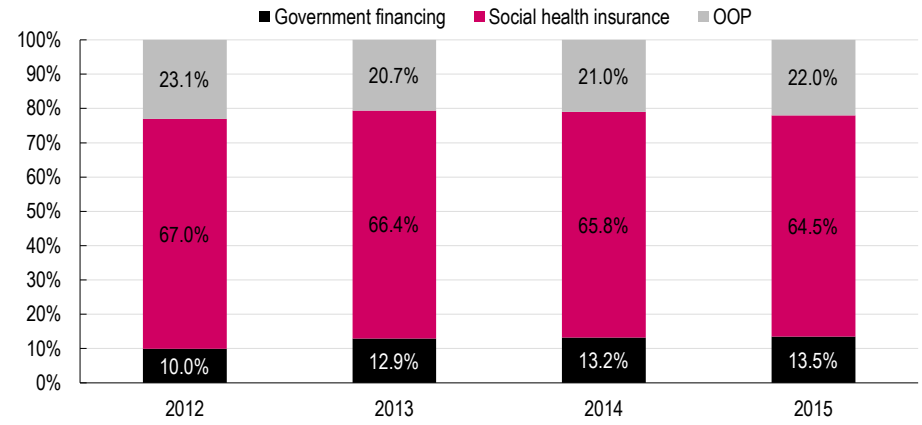
Source: BMI, WHO

Figure 50: Private sector healthcare expenditure dynamics in Romania



Source: BMI, WHO

Figure 51: Current healthcare spending in Romania breakdown



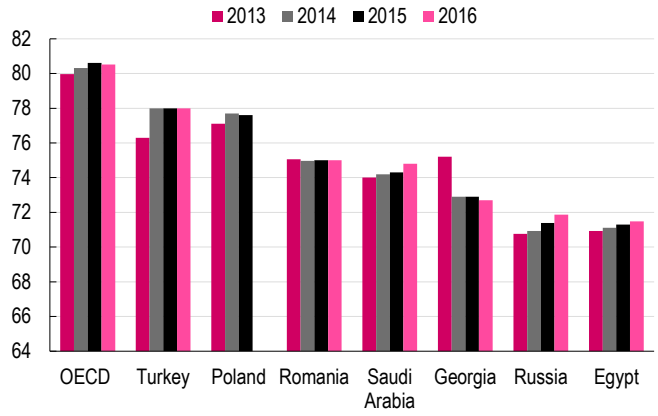
Note: Ex. investments.

Source: WHO

Status of health

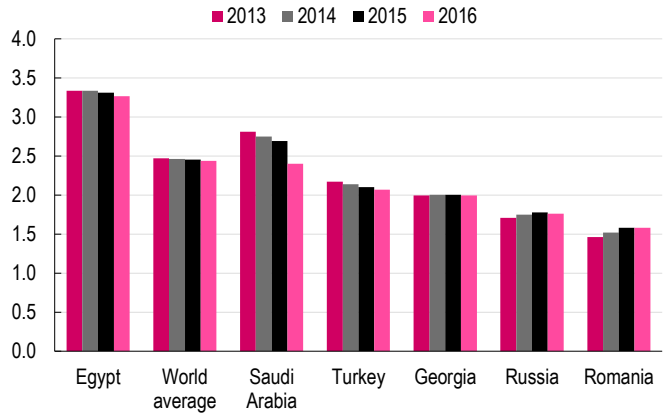
The life expectancy in our sample of countries has reached and exceeded 70 years, and while this is still behind the near-80 mark for OECD countries, the past 20 years have seen a significant increase due to an overall improvement in living conditions, higher educational levels, and improvements in healthcare and its affordability – trends that are likely to continue.

Figure 52: Life expectancy, total population at birth, years



Source: World Bank, health ministries, NCDC, Rosstat

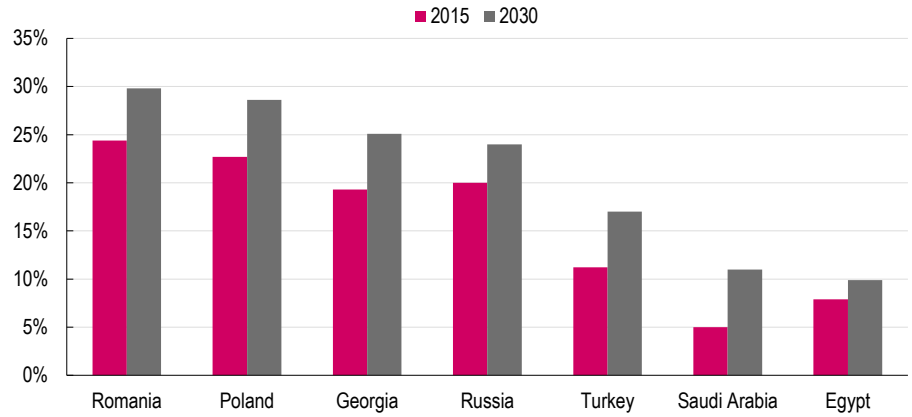
Figure 53: Fertility rate, total (births per woman)



Source: World Bank, Rosstat, health ministries

Differences emerge when one compares the current and expected changes in demographics – Georgia, Romania and Russia have the lowest fertility rates in the sample and will have an even higher proportion of 'older' people unless population growth accelerates: something that we do not expect to happen. Egypt and Saudi Arabia are on the other end of the spectrum, with the fastest population growth and hence with the lowest proportion of 'older' population.

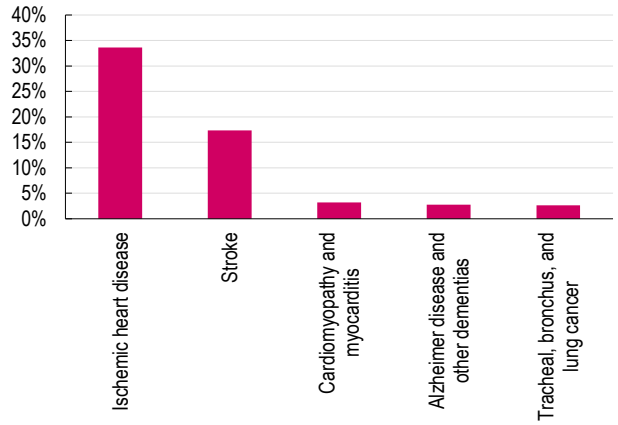
Figure 54: Country ranking by % of population aged 60 years or over



Source: UN

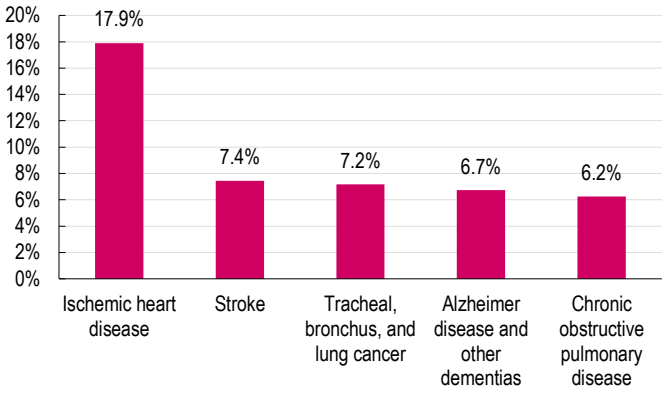
Egypt, Saudi Arabia and Turkey have the overall youngest population in our sample of countries with a smaller portion of older population – e.g. those who are 60 years old and above already comprise 20%+ of the Romanian, Russian and Georgian populations, while they comprise only 10% or less in Turkey, Egypt and Saudi Arabia.

Figure 55: Top-5 cases of death in Russia in 2016



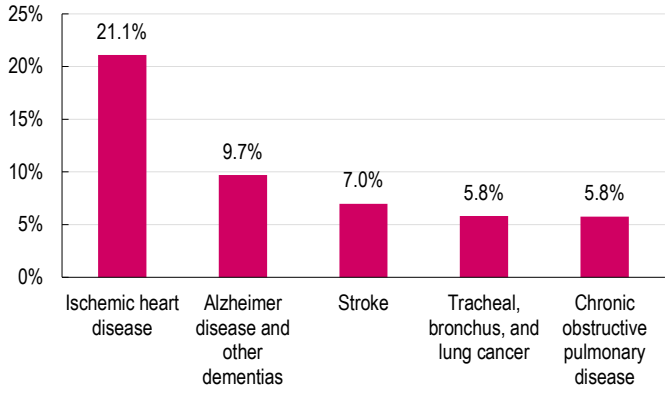
Source: IHCME

Figure 56: Top-5 cases of death in Georgia in 2016



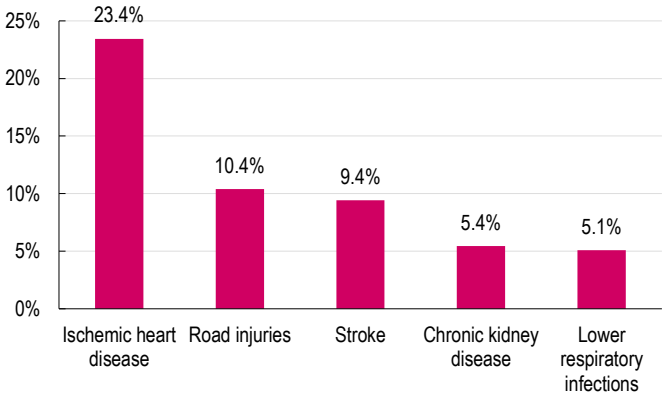
Source: IHCME

Figure 57: Top-5 cases of death in Turkey in 2016



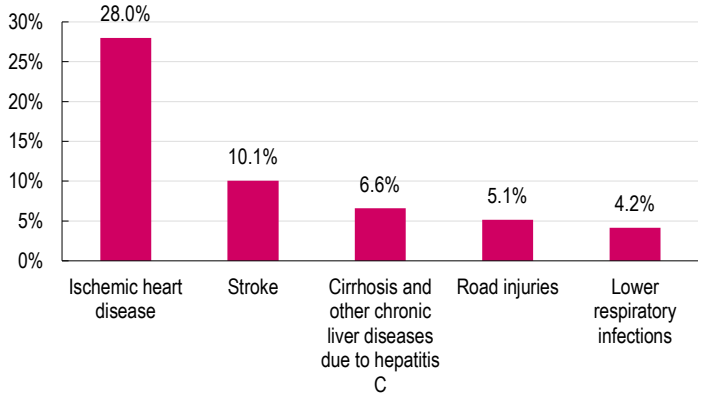
Source: IHCME

Figure 58: Top-5 cases of death in Saudi Arabia in 2016



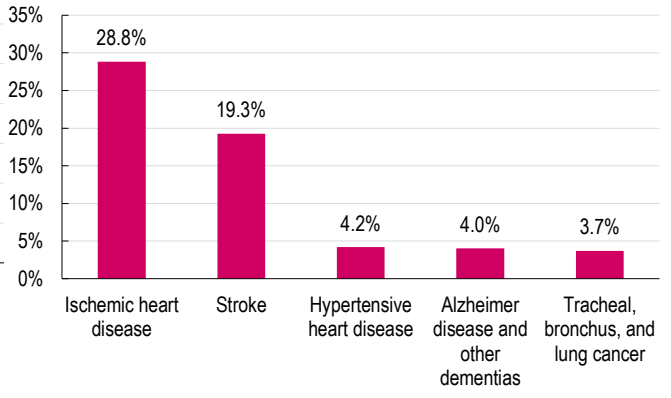
Source: IHCME

Figure 59: Top-5 cases of death in Egypt in 2016



Source: IHCME

Figure 60: Top-5 cases of death in Romania in 2016

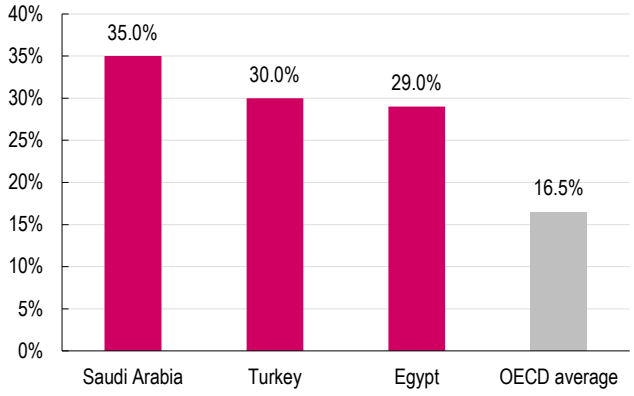


Source: IHCME

Non-communicable diseases (NCDs) such as cardiovascular diseases, diabetes, cancer and chronic respiratory diseases, are now the leading causes of death in our sample countries. Ischemic heart decease and stroke are the number one causes of death in our sample countries but the statistics do not provide insight into the causes preceding

cardiac arrest or stroke. These are influenced by the lifestyles of the population in our sample countries. For instance, Egyptians' sedentary lifestyle and poor dietary habits led to 70% of population being overweight and 8% of the population suffering from diabetes, affecting their cardiovascular system. Alcohol is less of an issue in Muslim countries but is a big reason leading to cardiovascular sicknesses in Russia and Romania. Saudi Arabia has a very high rate of deaths caused by road accidents.

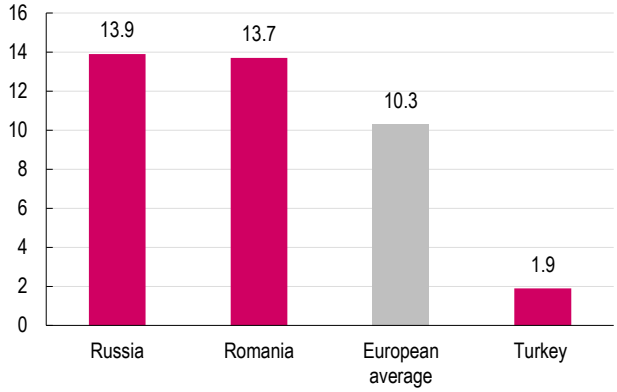
Figure 61: Obesity as % of population in 2017



Note: Rough estimates.

Source: WHO, OECD

Figure 62: Alcohol consumption, litres per capita in 2017



Note: Rough estimates.

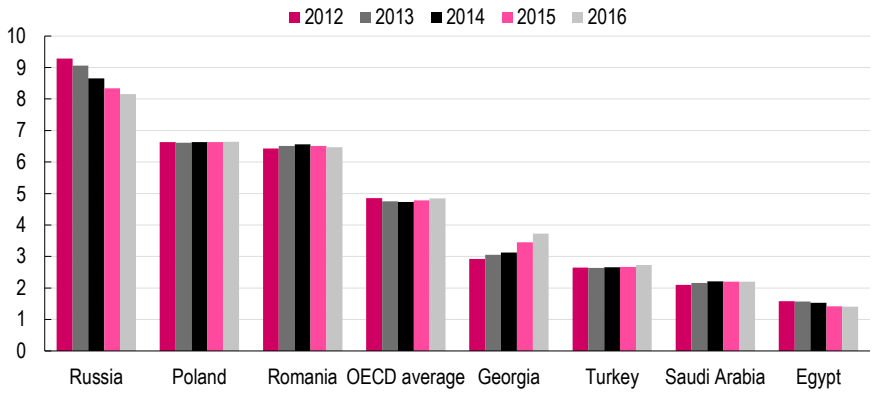
Source: WHO

Medical facilities and human resources

Russia has the highest bed density, not only compared with our sample countries but also globally – twice the OECD level and more than twice our sample countries. This is a legacy of the Soviet Union which prided itself on providing healthcare services by over-investing into healthcare infrastructure and human resources (the Soviet Union also used to have the highest density of doctors per capita). Countries such as Georgia – also once part of the Soviet Union – had a similar situation, but after its secession the lack of state funding caused a significant number of closures and the eventual privatisation of nearly all medical infrastructure in the country.

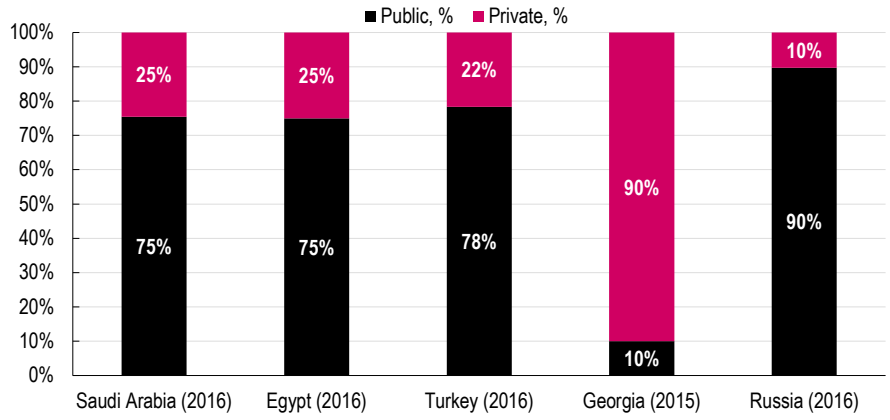
Apart from Romania, Georgia is closest to OECD levels in terms of bed capacity while Egypt is on the lower end, implying a more urgent need to add capacity compared with other countries. Russian bed capacity has fallen over the past few years – the number of beds in public ownership has decreased due to the reduction in public funding and while private hospitals have started to grow to fill this niche, the net result is and will continue to be a decrease in bed capacity in the country, in our view.

Figure 63: Bed density per 1,000 population



Source: OECD, Rosstat, Geostat, health ministries

Figure 64: Private vs public ownership of bed capacity (last data available)

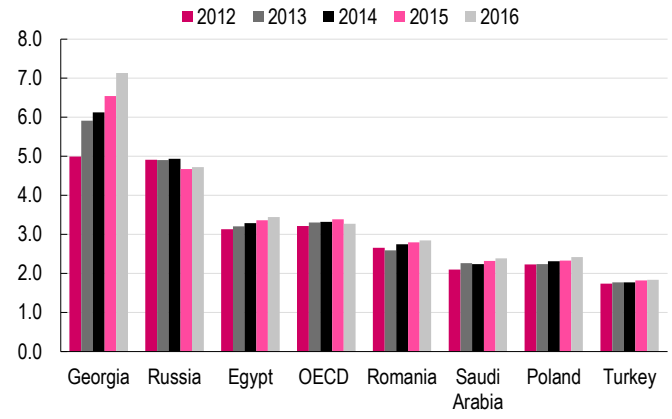


Source: Rosstat, Turkstat, GHG, health ministries

Russia has the highest proportion of bed capacity in public hands among our sample countries, with the least efficient use of resources while displaying above-OECD average outpatient and inpatient visits/discharges per capita. In a public system where healthcare is free and unrestricted as to the number of visits or days spent, the statistics inevitably show high bed utilisation rates, longest average length of stay (ALOS) and highest per-capita outpatient and inpatient encounters. Georgia is on the other end of spectrum, with the highest number of beds in private hands (expect for mental and penitentiary hospitals).

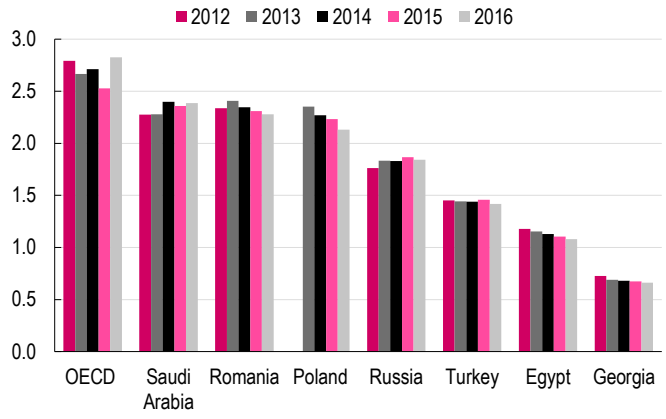
As spending shifts more towards private spending we expect the average number of visits as well as hospitalisations to decline in Russia and Turkey but to increase for other countries.

Figure 65: Physicians density per 1,000 population



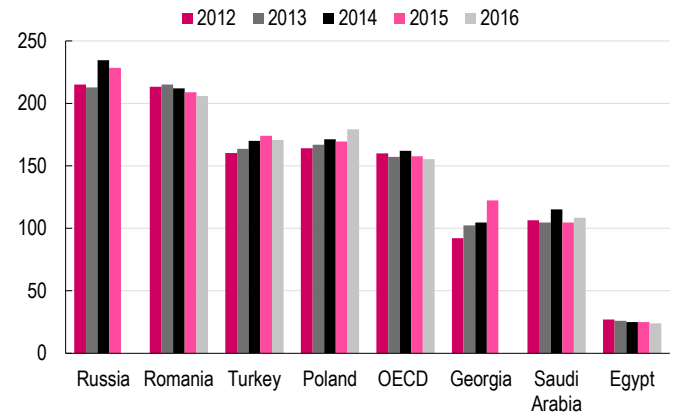
Source: OECD, Rosstat, Geostat, health ministries

Figure 66: Nurse-to-physician ratio, x



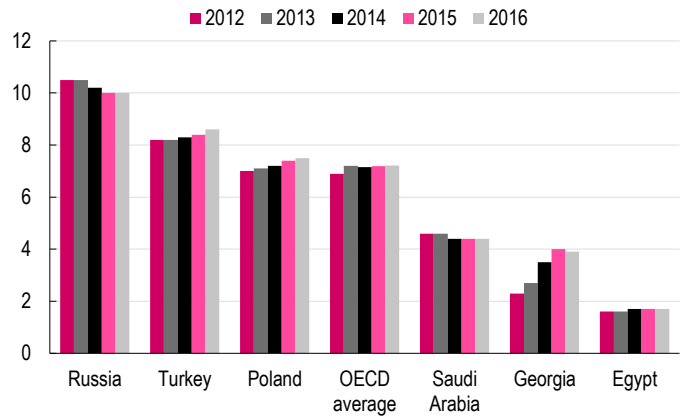
Source: OECD, Rosstat, Geostat, health ministries

Figure 67: Inpatient discharges per 1,000 population



Source: OECD, NCDC, health ministries

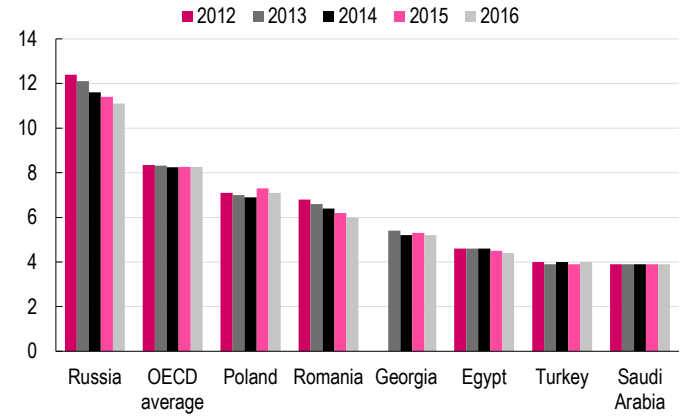
Figure 68: Outpatient visits per capita



Source: OECD, NCDC, health ministries

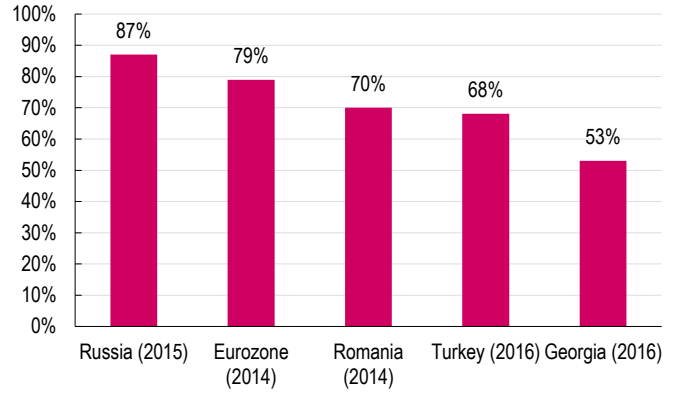
Somewhat surprisingly, Georgia, despite having largely a privately administered healthcare system, has the highest physician density among the sample countries, which is also much above the OECD average. This could be an overcompensation for the low nurse to physician ratio – i.e. with difficulties finding qualified nurses (something that local companies complain about), some doctors fresh from university and gaining experience may be being used as 'high-end nurses' while still being counted as doctors. Or it could be a genuine overcapacity – if Georgia had OECD-type physician density, its nurse to physician ratio would be in line with that of most of the sample countries. However, most of the sample countries genuinely lack nurses and we would expect in the future to see this ratio creeping up closer to the OECD average.

Figure 69: Average length of stay, days



Source: OECD, WHO, health ministries

Figure 70: Bed occupancy (last data available)



Source: OECD, World Bank, health ministries

Russia

Competitive environment

Only 10% of bed capacity in Russia is in private hands (see Figure 64) and the market remains highly fragmented – e.g. the top-10 private market players accounted for only 10% of market share by revenue in 2017. In Moscow, the top 10 accounted for a 27% share in rouble terms. In the past few years, as public spending has been cut, there has been an increase in private healthcare providers and we believe their share will grow due to faster expansion. We also think the sector will see consolidation in coming years, especially in the Russian regions.

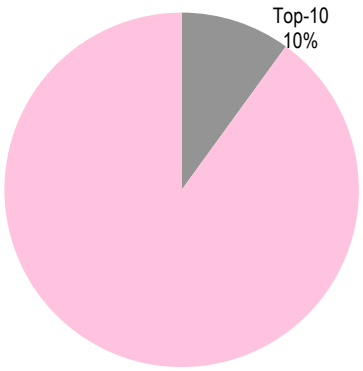
Figure 71: Top-10 private healthcare providers in Russia

	Revenue 2017, RUBmn	Revenue, YoY	Number of clinics and hospitals	Revenue 2016, RUBmn	Revenue, YoY	Number of clinics and hospitals	Revenue 2015, RUBmn	Number of clinics and hospitals
MD Medical	13,755	12.9%	38	12,179	28.1%	31	9,507	29
Medsi	11,670	24.0%	38	9,409	14.4%	28	8,227	28
EMC	10,737*	12.3%	6	9,557	25.8%	5	7,599	4
SM Clinic				4,435	20.4%	13	3,685	12
AVA-Peter+Scandinavia+AVA-Kazan				4,351	18.0%	18	3,687	16
Medicina Clinic				3,350	-5.0%	1	3,526	1
Bud zdorov				3,071	-3.4%	10	3,178	13
National Medical Network				2,904	0.5%	22	2,890	41
Medswiss				2,903	27.4%	7	2,278	7
Family doctor				2,393	7.3%	18	2,231	17

Note: EUR163mn translated at RUB65.9/EUR.

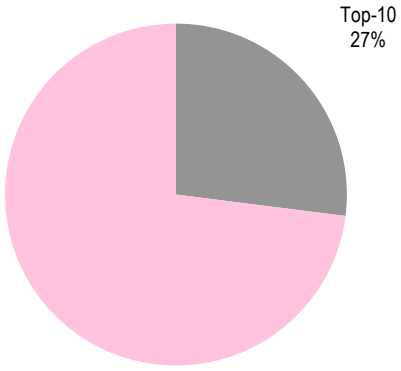
Source: Vademecum

Figure 72: Market share of top-10 players in Russia among private healthcare providers, total market of RUB552bn, 2017



Source: Vademecum

Figure 73: Market share of top-10 players in Moscow among private healthcare providers, total market of RUB213bn, 2017

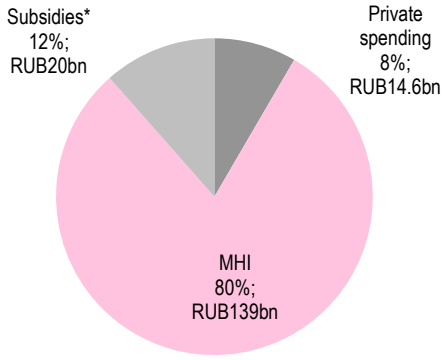


Source: Vademecum

It is worth noting that public healthcare providers are also involved in commercial activities, although their share of the total pie is small and unlikely to rise significantly in the coming years. According to Vademecum, the top-100 regional state healthcare organisations (including Moscow Region) in 2016 earned RUB14.6bn for paid services, or 2% of total legal commercial services provided in Russia, with voluntary health insurance (VHI) accounting for more than half of that, while the MHI contribution amounted to RUB139bn. Federal healthcare organisations and departmental hospitals (e.g. hospitals of various ministries or state companies such as Gazprom or Russian Railways [RZhD]) were not included in the sample, but could also target increasing their income from commercial activities. Departmental hospitals received RUB7.8bn in revenue from paid services in 2016, while the total annual revenue of RZhD-Medicine amounted to RUB33bn, according to Vademecum.

Private healthcare providers, in turn, are looking for a new source of income aiming to tap into state-run insurance scheme (MHI), usually aiming for more expensive specialised services. According to the Federal Obligatory Medical Insurance Fund, there were 2,540 private healthcare providers operating in the MHI segment in 2016, up from 1,333 in 2013. At present, MHI's contribution to private players' revenue remains marginal (around 8-9% in 2017). The most attractive MHI segment for private players is secondary care. For instance, European Medical Center (EMC) performed 8,000 PET diagnostics in Moscow in 2016 with c. $1k average ticket (90% of total diagnostics under MHI). According to the company's CEO, EMC was granted 10,000 PET diagnostics in 2018 under the MHI scheme and expects to develop this segment in the future.

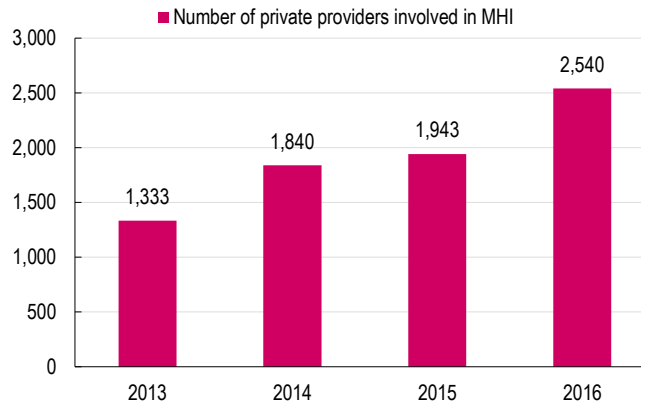
Figure 74: Private spending accounted for c. 8% in top-100 regional public healthcare provider revenue structure in 2016…



*Incl. allocation for high-tech medical services.

Source: Vademecum

Figure 75: …while the number of private healthcare providers operating in MHI is gradually increasing



Source: Federal Obligatory Medical Insurance Fund

Typically, the prices of public providers in the regions are significantly lower than in the private sector (up to 50%), which makes regional expansion more challenging for private players and might put pressure on margins. In Moscow, however, public providers' prices are closer to average private sector price levels and are even occasionally higher, depending on the specific service.

Figure 76: Prices for some medical services (public vs private) in regions and Moscow, RUB (unless otherwise stated)

	Public	Private	Difference
Moscow			
Cardiologist initial consultation	3,000	2,700	11%
ENT specialist initial consultation	2,500	2,700	-7%
Clinical blood analysis	500	950	-47%
Echocardiography	4,300	5,660	-24%
Intravenous contrast computed tomography	10,500	9,000	17%
Inpatient day*	4,500	5,750	-22%
Average by region			
Cardiologist initial consultation	716	1,398	-49%
ENT specialist initial consultation	734	1,417	-48%
Clinical blood analysis	280	396	-29%
Echocardiography	1,736	1,877	-7%
Intravenous contrast computed tomography	5,821	6,497	-10%
Inpatient day*	2,400	4,723	-49%

*Surgical profile.

Source: Vademecum

Regulatory developments

- The Russian Ministry of Trade has suggested that foreign producers and Russian distributors of foreign-produced medical equipment should lose the 0% VAT exemption which applies to date to all medical equipment sold in Russia.

Only 21% of all medical equipment sold in Russia in 2017 was locally produced. It is not clear yet if the change will be approved; there is also a discussion as to whether the users of medical equipment should be allowed to pass on the VAT increase to end consumers.

- The Russian government allowed the use of telemedicine from 2018 – a market segment that is estimated by *Kommersant* newspaper to amount to $155mn in 2019 and to reach $1.3bn in 2023. There are several companies working in this market segment but the company Doc+ has recently announced the largest investment in the sub-segment by raising $9mn from private investors in July 2018, to bring total capital raised to c. $20mn, after having already raised sums in 2016 and 2017.

MD Medical Group

MDMG is Russia's only publicly traded healthcare provider. We rate the shares **BUY** with a TP of $10.7/GDR.

Figure 77: Snapshot of MDMG

MktCap, $mn	517
Listing	LSE (since October 2012)
Avg. trading volume, $mn	0.1
Shareholders	
Dr. Mark Kurtser	68%
Free float	32%

Note: Price as of market close on 30 August 2018.

Source: Company data, Bloomberg

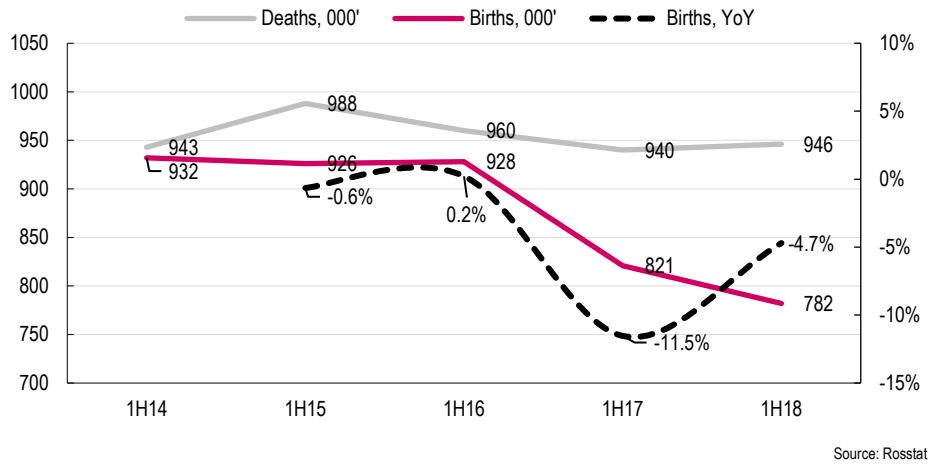
Main positives:

- The Russian government's curtailing of public healthcare expenditure and deteriorating service levels of public clinics diverting private spending into private healthcare.
- Regional expansion under an attractive scheme of receiving land, building and/or subsidised credit terms from local governments.
- Utilising a well-known brand to grow geographically as well as horizontally by adding services.
- High levels of profitability with EBITDA margin around 30%: one of the highest in industry.

Main risk factors:

- The slow growth of salaries and limited use of private insurance.
- Potential loss of focus due to a large number of new facilities spread out across various parts of Russia.
- Declining birth rates in Russia – natal services is a key business for MDMG (16.5% of its FY17 revenue).

Figure 78: Demographic trends in Russia



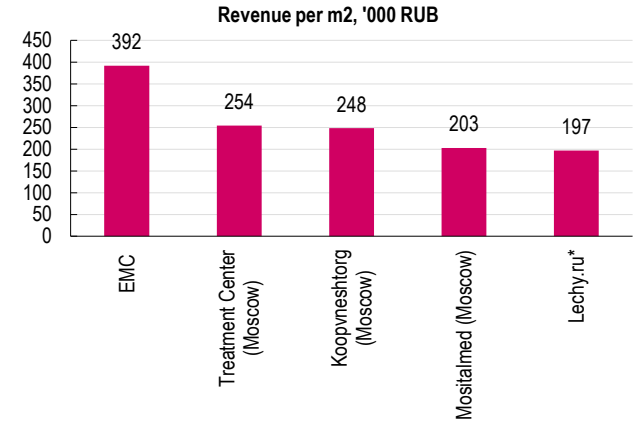
Source: Rosstat

- Rising competition in MDMG's core segments, for instance IVF. In November 2017, former MDMG CEO Elena Mladova opened REMEDI clinic in Moscow with a capacity of 2,000 IVG cycles and 70,000 outpatient visits per year.
- A founder/manager business with a high dependence on personal connections and personal deep involvement in all aspects of business.
- Low liquidity of the stock.

Unlisted companies

In the top three of the Russian private healthcare companies in addition to MDMG there is Medsi (a Sistema-owned company) and European Medical Center (EMC – owned by private investors and Baring Vostok private equity fund). From the limited sources publicly available we provide a brief snapshot of them below.

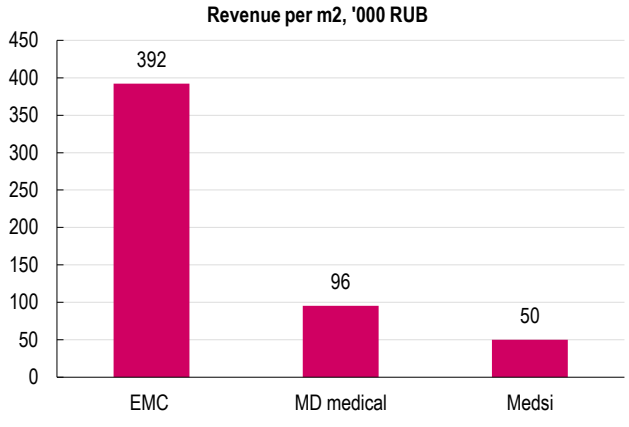
Figure 79: Top-5 healthcare providers in 2016 in terms of revenue per m2



*Incl. laboratories Invitro.

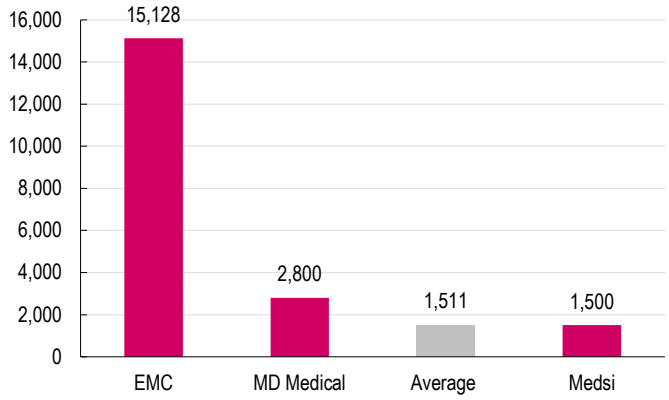
Source: Vademecum

Figure 80: EMC revenue per m2 vs MD medical and Medsi, 2016



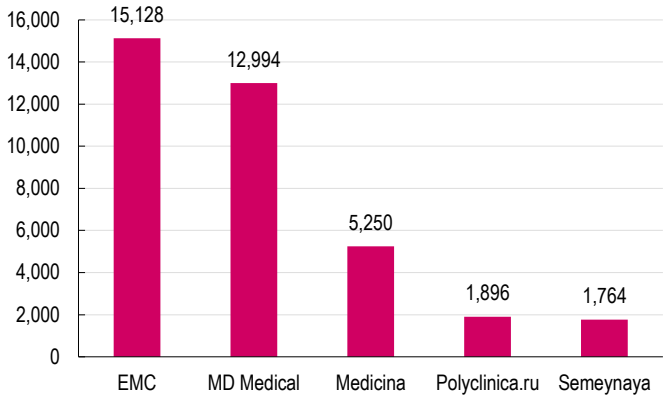
Source: Vademecum

Figure 81: Average outpatient ticket in Russia by companies in 2017, RUB



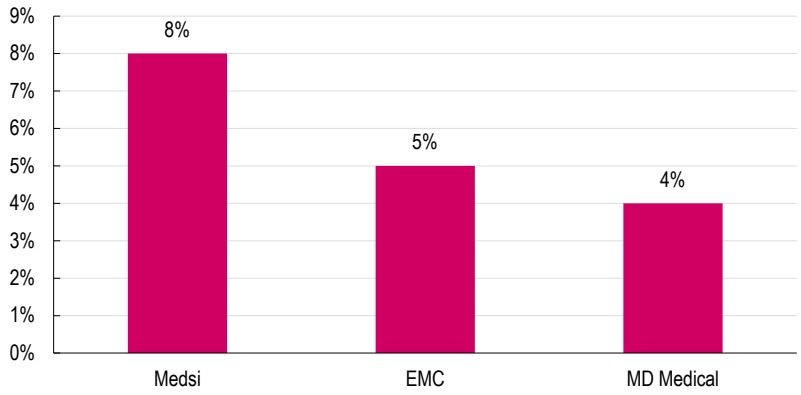
Source: BusinesStat, Company data

Figure 82: Average outpatient ticket in Moscow in 2017 by companies, RUB



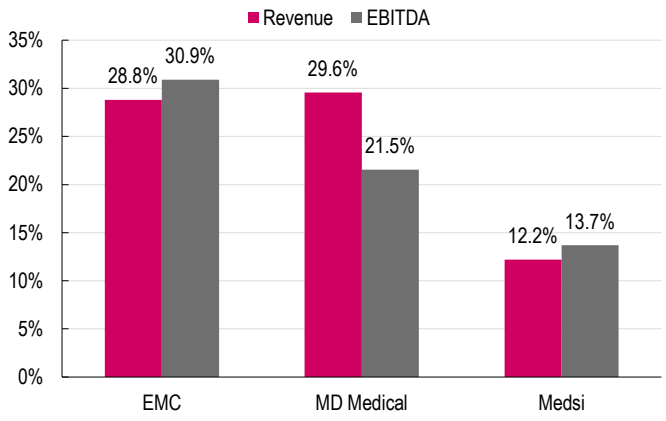
Source: BusinesStat

Figure 83: MHI contribution to revenue of selected companies in 2016



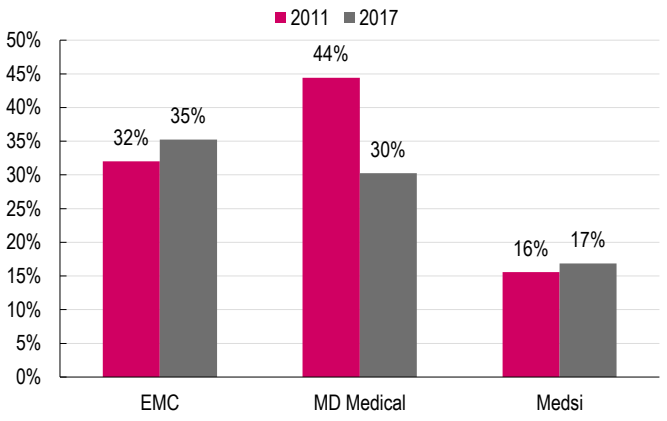
Source: Vademecum

Figure 84: Revenue and EBITDA 2011-2017 CAGR in RUB terms



Source: Reuters, *Kommersant*, Company data

Figure 85: EBITDA margin dynamics



Source: Reuters, *Kommersant*, Company data

EMC has the highest average cheque among the private healthcare service providers, mainly explained by its premium segment and presence solely in Moscow, where charging significantly above average for Russia prices is possible (MDMG's prices in

Moscow are more comparable with those of EMC). Medsi's prices are below average in Russia (although in 1Q18 the company reported its average cheque grew to RUB1,700).

EMC has posted the highest growth in EBITDA over 2011-2017, partially due to strong revenue growth and partially to a consistent improvement in EBITDA margins. MDMG's entry into the Russian regions was accompanied by a substantial drop in margins due to the service price differential between Moscow and elsewhere in Russia. However, MDMG's margin has stabilised around 30% over the past year despite the company's continued expansion. Medsi has grown less than others – in part due to the loss of a substantial corporate client in 2014 (the Moscow government) – and its lower EBITDA margin vs others is also a result of its lower service prices vs its peers. Possibly, however, this may point to upside in the future. As a result, EMC has had the best RoIC among our Russian company sample, at c. 24% in 2017, vs c. 18% for MDMG.

Medsi operational and financials snapshot

Compared with EMC, more data are available for Medsi, as Sistema discloses its main operational and financial data. For instance, after the loss of the Moscow government as a client in 2015, Medsi's key operating metric has been steadily improving with especially strong performance in 2017. In 2018, it plans to open at least three new clinics in Moscow and the regions and to start construction of a flagship multifunctional medical centre on Michurinsky Prospect, with an area of 28,000 m2, as well as to proceed with M&A – its preferred avenue of growth in the regions.

Figure 86: Medsi facilities

Facilities	Quantity
Clinical diagnostic centres (CDC), total	4
CDC Krasnaya Presnya	
CDC Belorusskaya	
CDC Grokholsky	
St Petersburg (Medem)	
Children's clinics	2
Primary care clinics	18
Hospitals	2
Wellness centres and sanatoriums	4
Regional clinics, total	12

Source: Company data

Figure 87: Medsi operating results in 2016 and 2017

	2017	2016	YoY
Patient visits, '000	7,901	7,314	8.0%
Services provided, '000	12,359	11,483	7.6%
Area, '000 m2	233	221	5.8%
Average cheque, RUB '000	1.5	1.3	14.8%
Revenue per m2	50	42.55	17.5%

Source: Company data

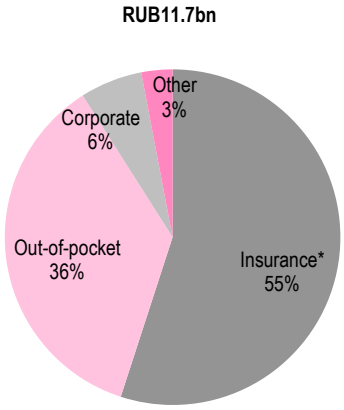
Figure 88: Medsi facilities statistics

Occupancy rate of outpatient facilities, 2017	
CDCs	57%
Paediatric clinics	55%
Primary care clinics	62%
Inpatient facilities statistics, 2017	
Hospital Otradnoe	
Medical specialties	Multi-specialty: oncology, gynecology, urology, general surgery, vascular surgery, etc.
Revenue, RUBmn	1,277
Beds	Over 450 beds (up to 750 at full capacity)
Occupancy rate	60%*
Hospital Botkinskaya	
Medical specialties	Limited range: oncology, trauma, gynecology and breast care
Revenue, RUBmn	606
Beds	133
Occupancy rate	63%

*For 2017 based on 400 working beds.

Source: Company data

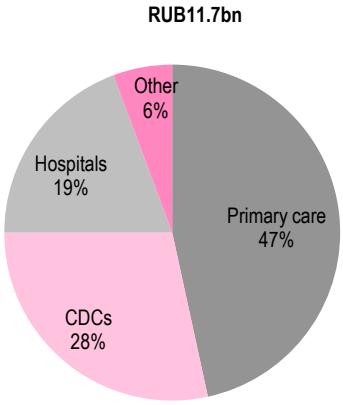
Figure 89: Revenue breakdown by client type, 2017



*Voluntary health insurance (VHI) and mandatory health insurance (MHI).

Source: Company data

Figure 90: Revenue breakdown by facility type, 2017



Source: Company data

Figure 91: Historical financials and operating metrics, RUBmn (unless otherwise stated)

Financial performance	2013	2014	2015	2016	2017
Revenue	9.4	9.8	8.2	9.4	11.7
YoY	-22%	4%	-16%	14%	24%
EBITDA	1.2	0.9	0.5	0.6	2.0
Margin	13%	9%	6%	6%	17%

Operating performance	2013	2014	2015	2016	2017
Attendance, mn visits	6.0	7.7	7.3	7.3	7.9
Average check, 000' RUB	1.6	1.3	1.1	1.3	1.5

Source: Company data

Georgia

GHG is the largest private healthcare group in Georgia with c. 28% of the country's bed capacity, c. 22-24% of overall healthcare revenue, c. 30% of pharma revenue and c. 30% of the health insurance market. We have a **BUY** rating on the stock with a TP of GBp370.

Figure 92: Snapshot of GHG

MktCap, $mn	408
Listing	LSE (since November 2015)
Average trading volume, $mn	0.1
Shareholders	
Georgia Capital JSC	57%
Free float	43%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

Figure 93: GHG's main financial characteristics, GELmn (unless otherwise stated)

	2016	2017	2018E	2019E	2020E	CAGR 2017-2020E
Revenue	423.8	745.7	850.1	926.5	999.4	10.3%
EBITDA	78.0	108.1	132.2	146.5	168.3	15.9%
EBITDA margin	18.4%	14.5%	15.6%	15.8%	16.8%	na
EBIT	58.4	82.4	103.4	115.5	135.4	18.0%
Net income	61.3	45.9	69.3	87.4	113.1	35.0%
Net income margin	14.5%	6.2%	8.2%	9.4%	11.3%	na
EPS, GEL	0.4	0.2	0.4	0.5	0.7	47.8%
DPS, GEL	-	-	-	0.2	0.3	na
OpCf	42.4	58.2	93.9	119.3	156.0	38.9%
FCF	neg	neg	30.2	77.9	107.5	na
RoIC	15.0%	10.5%	11.7%	12.5%	14.4%	na
Net debt/EBITDA, x	2.3	2.7	2.2	1.5	0.8	na

Source: Company data, Renaissance Capital estimates

Georgian Healthcare Group

Main positives:

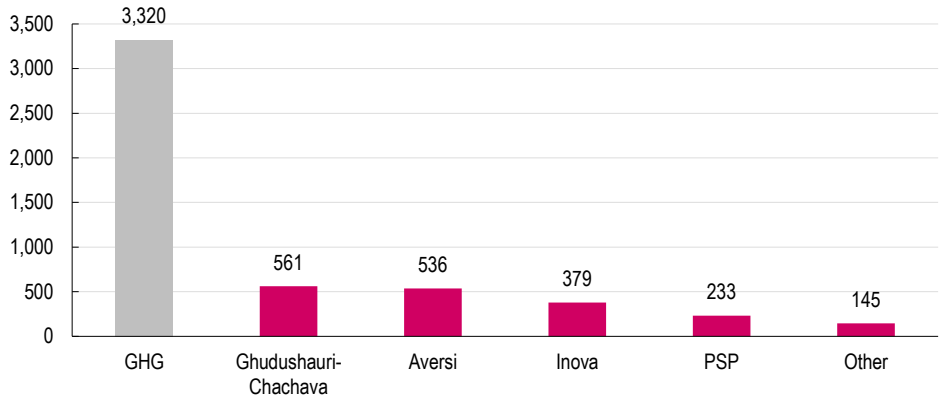
- The government's stricter licensing and quality control of private healthcare providers is likely to result in a reduction of sub-scale players.
- GHG has completed its investment programme to refurbish two referral hospitals in Tbilisi, which are ramping up bed utilisation (40% and 15% respectively at end-1H18 and after six-to-seven months and three months, respectively, in operation).
- It has revamped its outpatient services and we expect to see an acceleration in outpatient revenue.
- Ample opportunities to develop healthcare tourism.
- Margins in healthcare business to improve driven by operating leverage of new referral hospitals and larger utilisation of pharma products in own healthcare businesses (medicines and supplies).
- We project a re-acceleration of growth and are looking at 2018 YoY growth of 16% in EBITDA and 50% in net income (in Georgian lari terms).
- GHG will become a net FCF generator from 2018 onwards, on our estimates (we expect capex to fall to slightly above maintenance levels from 2019).
- GHG is likely to start paying dividends after 2019.
- One of the best management teams in the sector incentivised by stock ownership.
- Progressive shareholder – Georgia Capital (GCEO) – with a long-term plan to increase GHG's free float.

Main risk factors:

- The government's desire to cap growth in the universal healthcare budget, potentially introducing limitations on reimbursements or increasing co-payment requirements (an alternative possibility is to oblige employers to pay into a currently non-existent social and healthcare security fund, which would be positive to the sector).
- Low penetration of private insurance and population unaware of benefits of pre-emptive care capping the speed of increases in the number of doctor visits per capita.
- Low availability of trained personnel, especially nurses, potentially prolonging the extraction of efficiencies by increasing nurse to physician ratios.
- Potential stock overhang from GCEO's strategy to sell down its GHG stake; however, GCEO has recently stated that it has neither an obligation to sell down nor plans to do so in the near future.
- Competition for investor money from the parent CGEO, which is also a UK-listed company deriving the largest part of its value from its stake in GHG.

- Weakening currency, especially vulnerable in light of the ongoing Turkish lira crisis.

Figure 94: Top private healthcare providers in Georgia in terms of bed capacity as of 1Q18



Source: Company data

Turkey

Medical Park

MPARK is the largest private healthcare service provider in Turkey in terms of number of hospitals, hospital beds and geographical presence, thanks to its 31 hospitals and almost 6,000 hospital beds in 17 different cities across the country. Today (3 September 2018), we initiate coverage of MPARK in a research report accompanying this note (*Turkey: MLP Saglik Hizmetleri – A clean bill of health –* ***BUY***) with a **BUY** rating and a TP of TRY18.10.

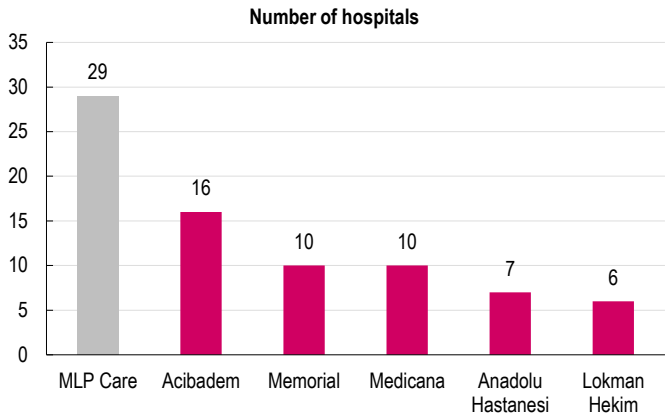
Figure 95: Snapshot of MPARK

MktCap, $mn	344
Listing	ISE (since February 2018)
Average trading volume, $mn	1.0
Shareholders	
Lightyear Healthcare	31%
Sancak İnşaat	15%
Other individual investors	19%
Free float	35%

Note: Prices as of market close on 30 August 2018.

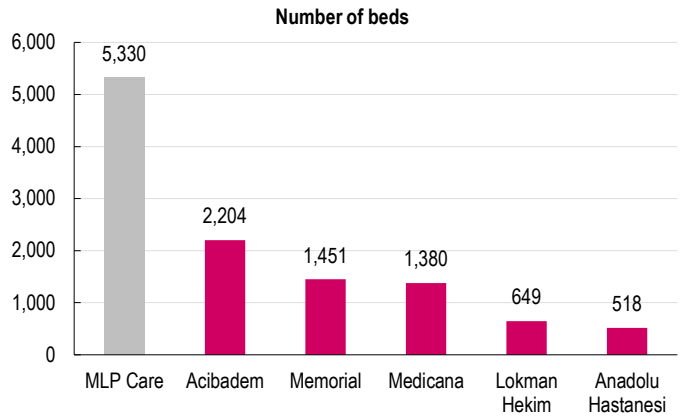
Source: Company data

Figure 96: Top 6 private healthcare providers in Turkey in 2017



Source: TOBB

Figure 97: Top 6 private hospitals account for c. 26% of total private hospital market in terms of bed capacity in 2017



Source: TOBB

Main positives:

- Largest nationwide private healthcare provider in the country targeting various customer segments.
- Strong brand recognition, wide (vs competitors) network of hospitals and clinics, flexible pricing policies in various hospital concepts, ability to attract and retain well-known and respected physicians and the infrastructure to develop complex treatment practices.
- The company has completed its heavy capex cycle and deleveraged thanks to organic growth and IPO proceeds; targeting ongoing 500 hospital beds pa expansion under an asset-light model.
- Extremely fragmented structure of the private healthcare industry in Turkey should allow MPARK to grow inorganically.
- Diversified revenue base (SSI, self-pay patients, private insurance companies and contracted institutions, foreign medical tourism and other ancillary businesses accounted for respectively 35%, 33%, 17%, 7% and 7% of total revenue in 2017) adds to top-line growth prospects.
- Strong cost control. Total cost of service (as a % of revenue) has been on a declining trend thanks to strict cost control as well as the variable nature of the main cost items.
- Hedged FX exposure through FX-denominated revenue exceeding FX-denominated expenses.
- Thanks to IPO proceeds, total FX-denominated debt has halved in absolute terms and its share in total debt dropped to 40% as of 1Q18, from 56% as of end-2017 (prior to the IPO). Moreover, the company has hedged all principal and interest payments of its euro-denominated syndicated loan for 2018-2020: FX-denominated debt accounted for 29% of total debt at 1H18, with a repayment schedule that is not onerous, in our view.
- Declining net debt/EBITDA, which we expect to drop from 2.5x in 1H18 to 1.7x in 2018E and 0.7x in 2019E.

- Strong outlook as a financial generator – we expect a revenue 2017-2020 CAGR of 17% and an EBITDA CAGR of 23%, with the margin improving to 16.3% in 2020E and 17.8% in 2025% (vs 14.2% in 2017).
- High likelihood of becoming a strong dividend payer once the planned investments are completed, due to high FCF generation capability. Without any new greenfield investment or acquisitions, we expect FCF yields to reach above 20% in 2019E.
- We expect no tax expense until end-2020-end due to accumulated losses.

Main risk factors:

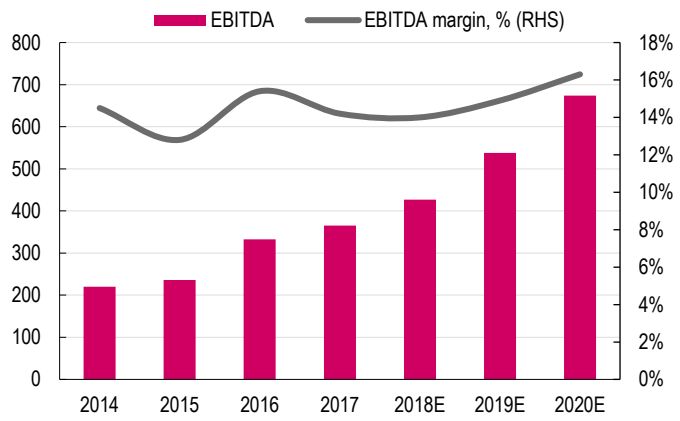
- Most of its businesses and assets are based in Turkey. As a result, economic and political developments in Turkey affect MPARK's business and finances.
- The company operates in a heavily regulated sector, so changes in Turkish laws and regulations may materially adversely affect the businesses.
- As the largest payer of healthcare reimbursements, the Turkish government may change its approach to the private healthcare industry and its pricing policies, which could have a significant negative impact on the company's revenue and market share.
- Higher competition from other hospitals and healthcare service providers may result in a decline in the company's revenue, profitability and market share.

Figure 98: MPARK's main financial characteristics, TRYmn (unless otherwise stated)

	2016	2017	2018E	2019E	2020E	2017-2020E CAGR
Revenue	2,160	2,576	3,051	3,600	4,146	17.2%
EBITDA	333	365	427	538	674	22.7%
EBITDA margin	15.4%	14.2%	14.0%	14.9%	16.3%	na
EBIT	180	190	241	338	481	36.2%
Net income	-45	-123	-8	179	394	-247.5%
Net income margin	-2.1%	-4.8%	-0.3%	5.0%	9.5%	na
EPS, TRY	-0.25	-0.70	-0.04	0.86	1.89	-239.6%
DPS, TRY	0.00	0.00	0.00	0.00	0.52	na
OpCf	314	555	424	652	653	5.6%
FCF	142	319	214	510	496	na
RoIC	9.8%	8.8%	12.4%	16.8%	22.7%	na
Net debt/EBITDA, x	3.8	3.8	1.7	0.7	0.1	na

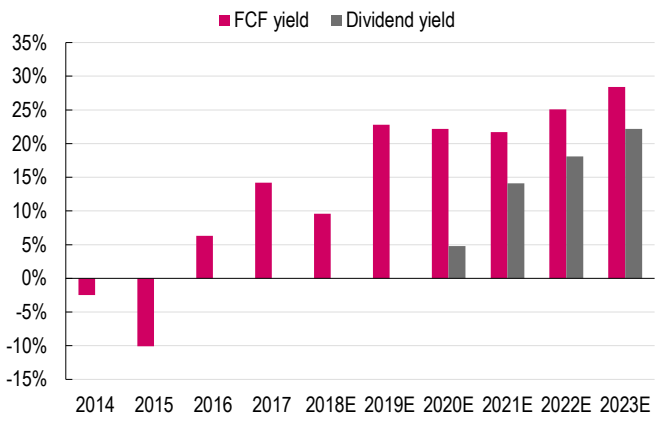
Company Data, Rasyonet, Renaissance Capital estimates

Figure 99: MPARK's EBITDA dynamics, TRYmn



Source: Company data, Renaissance Capital estimates

Figure 100: MPARK's FCF yield and dividend yield dynamics



Source: Company data, Renaissance Capital estimates

Lokman Hekim

Lokman Hekim (LKMNH) operates five hospitals (in Ankara and Van), one diagnostic centre (Iraq) and a new medical centre (Ankara). The hospital chain has a hospital bed capacity of 664 as at 1H18-end, making it the 10th-largest private healthcare provider in the country. We have a **BUY** rating on the stock with a TP of TRY6.80.

Figure 101: Snapshot of LKMNH

MktCap, $mn	19
Listing	ISE (since April 2011)
Average trading volume, $mn	0.2
Shareholders	
Founder shareholders & their relatives	26%
Free float	74%

Note: Price as of market close on 30 August 2018.

Source: Company data

Main positives:

- Largest healthcare provider in Ankara and only private healthcare provider in Van, with 650 beds at 1H18 likely increasing to 750 in two years.
- Good track record of controlling costs through utilisation of operating leverage, elimination of idle capacity and a success-based salary, fixing personnel costs at an unchanged level vs revenue.
- Declining debt, leaving room for inorganic growth or higher dividends or continuation of buybacks. We expect net debt/EBITDA to improve to below 2x in 2020 (from 3.4x in 2017), allowing the company to grow inorganically in Turkey's highly fragmented healthcare sector.
- Mandate for service outsourcing at Ankara Bilkent City Hospital to provide all physiotherapy and rehabilitation services for a five-year period. This diversifies revenue generation and strengthens LKMNH's market positioning in Ankara, and may become a new growth area for the company as there are 32 public-private partnership (PPP) projects (with 42k beds) across the country (the majority of these projects are likely to be completed in the next few years) to consider bidding for.

Main risk factors:

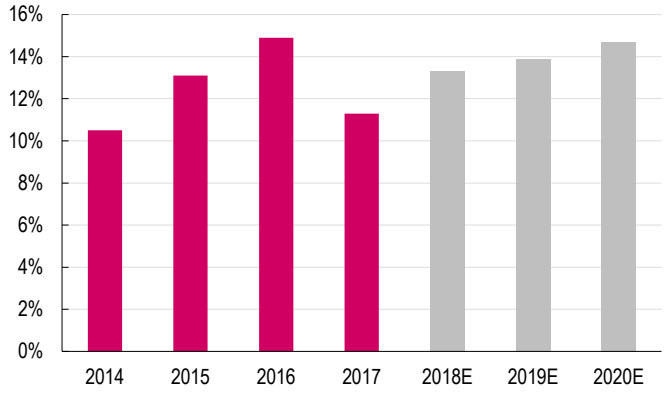
- Low liquidity of the shares.
- Higher competition from PPP projects in Ankara may result in a decline in the company's revenue, profitability and market share.
- Performance of its hospitals heavily depends on the company's ability to recruit and retain quality physicians and other healthcare professionals.
- The company operates in a heavily regulated sector, so changes in Turkish laws and regulations may materially adversely affect the businesses.
- Losing key personnel might be harmful for the organisation as well as growth plans, as the company is highly dependent on individuals in the senior management team.
- On the financial front, the company is subject to exchange rate and interest rate risk.

Figure 102: LKMNH's main financial characteristics, TRYmn (unless otherwise stated)

	2016	2017	2018E	2019E	2020E	2017-2020E CAGR
Revenue	194.5	246.1	285.9	331.5	396.9	17.3%
EBITDA	29.0	27.9	38.0	46.2	58.4	27.9%
EBITDA margin	14.9%	11.3%	13.3%	13.9%	14.7%	na
EBIT	21.5	18.9	28.0	34.1	45.6	34.2%
Net income	6.9	6.3	8.8	6.3	17.5	40.7%
Net income margin	3.5%	2.6%	3.1%	1.9%	4.4%	na
EPS, TRY	0.11	0.10	0.13	0.09	0.18	20.1%
DPS, TRY	0.05	0.07	0.03	0.02	0.04	na
OpCf	26	22	32	32	41	23.8%
FCF	-2.4	1.0	11.9	15.8	25.2	na
RoIC	13.3%	10.2%	15.0%	18.4%	22.0%	na
Net debt/EBITDA, x	2.4	3.4	2.8	2.6	1.8	na

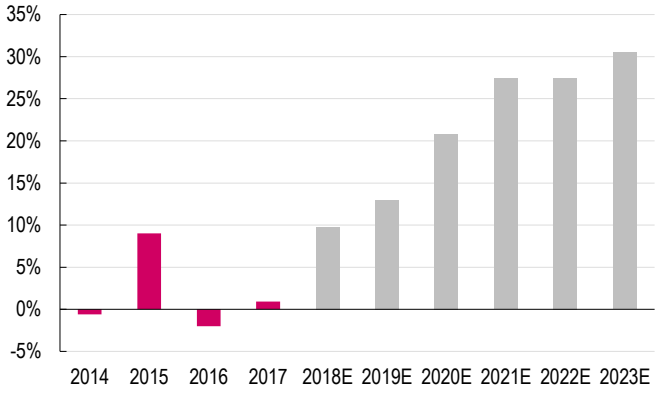
Company Data, Rasyonet, Renaissance Capital estimates

Figure 103: LKMNH's EBITDA margin dynamics



Source: Company data, Renaissance Capital estimates

Figure 104: LKMNH's FCF yield dynamics



Source: Company data, Renaissance Capital estimates

Egypt

Cleopatra Hospital Company

CHC is Egypt's largest private institutional hospital group, housing 643 beds and representing c. 8% of Cairo's total private bed count, almost 2x larger than its next competitor. The group's size allows it to capture the market's growth potential and benefit from economies of scale, further supporting its growth, profitability and leading position in a highly fragmented market. Today (3 September), we initiate coverage of CHC in a research report accompanying this note (*Egypt: Cleopatra Hospital Company – Organic growth overlooked – Initiate with **BUY***) with a **BUY** rating and YE19 TP of EGP4.19/share.

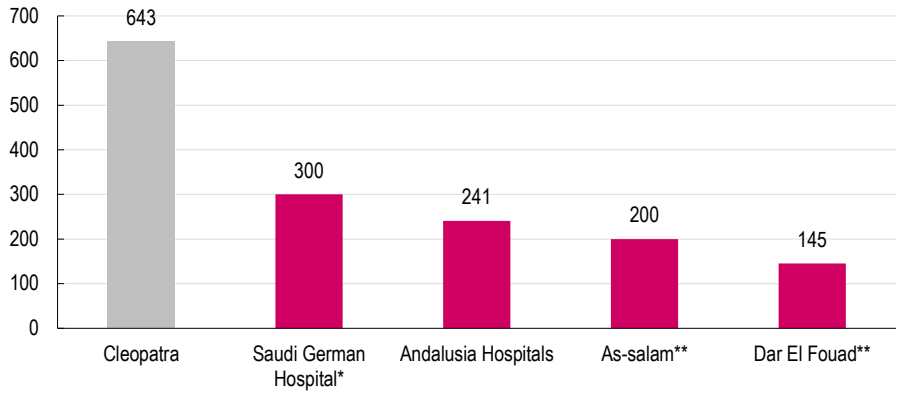
Figure 105: Snapshot of CHC

MktCap, $mn	327
Listing	EGX (since April 2016)
Average trading volume, $mn	0.2
Shareholders	
Care Healthcare	69%
Free float	31%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

Figure 106: Top private healthcare providers in Egypt in terms of bed capacity in 2015



*Saudi German started operations in 2016 (not fully operational yet).
**Dar El Fouad and As Salam are managed as one group.

Source: Company data

Figure 107: CHC's main financial characteristics, EGPmn (unless otherwise stated)

	2016	2017	2018E	2019E	2020E	2017-2020E CAGR
Revenue	864.4	1,126.8	1,443.4	1,782.5	2,150.3	24.0%
EBITDA	175.2	217.1	306.2	397.6	475.9	29.9%
EBITDA margin	20.3%	19.3%	21.2%	22.3%	22.1%	na
EBIT	145.0	175.6	267.2	349.9	422.8	34.0%
Net income	76.3	105.7	258.9	311.6	382.3	53.5%
Net income margin	8.8%	9.4%	17.9%	17.5%	17.8%	na
EPS, EGP	0.05	0.07	0.16	0.19	0.24	53.5%
DPS, EGP	-	-	-	-	0.12	na
OpCF	72.9	211.8	245.5	320.0	387.6	22.3%
FCF	28.1	86.1	58.8	111.0	236.6	40.0%
RoIC	27.7%	23.6%	44.6%	47.9%	50.6%	na
Net debt/EBITDA, x	(0.4)	(3.0)	(2.7)	(2.5)	(2.7)	na

Source: Company data, Renaissance Capital estimates

Main positives:

- Operating in Egypt's underserved market, with a high prevalence of disease and an absence of effective public insurance, demonstrates significant potential for private players such as CHC.
- Egypt is in the process of a major overhaul of its healthcare system, with the expected significant increase in the overall size of the market likely to be beneficial to private healthcare providers; .
- Driving integration of hospitals to raise the quality of service and efficiency levels across its hospital platform, allowing it to secure larger patient volumes, charge higher prices and offer fewer discounts to insurance providers.
- Standardising prices for similar services across all four hospitals via increasing prices and/or shifting to higher-priced services; we estimate average revenue/patient will increases at a 2018-2022E CAGR of c. 12%.
- Its large scale gives it higher bargaining power with suppliers, lowering its medical supply costs and consequently improving its profitability. We look for a c. 200-bpt EBITDA margin expansion over 2018-2022E.
- Widening its portfolio through the launch of polyclinics, which we estimate will contribute c. 7% of revenue in 2022E and should increase referrals to its hospitals.

- Cash availability for M&A in a fragmented healthcare market of subscale competitors.

Main risk factors:

- CHC could be faced with high acquisition multiples, given the limited options and multiple delays/halts with M&A execution to date, which could turn value-destructive.
- Payment of hefty claims related to ongoing legal cases and/or harm to the group's reputation and brand equity in the case of unfavourable rulings.
- Inability to successfully integrate CHC's hospital platform, hence missing out on benefits from synergies.
- Higher-than-expected labour cost inflation (we assume a c. 18% CAGR over 2018-2022E), given the labour-intensive nature of the sector (c. 57% of cash CoGS and c. 37% of revenue as of 2Q18).

Saudi Arabia

Main positives:

- Saudi Arabia has the largest population in the Gulf Cooperation Council (GCC), with a 2x higher growth outlook than the global average, according to the World Bank. Coupled with increasing average life expectancy, widespread prevalence of sedentary lifestyles leading to a rise in non-communicable diseases such as diabetes (30% of total population in 2017 diagnosed), heart disease and cancer will likely increase total healthcare by a 5% 2017-2020E CAGR, according to BMI.
- Continuing pressure on the government budget on the back of lower oil income bodes well to shifting healthcare expenditure towards the private sector. According to the government's National Transformation Plan, the private sector's share of healthcare spending will increase to 35% by 2020 from the current 26%.
- The Council of Cooperative Health Insurance (CCHI) expects to enforce insurance of remaining uninsured Saudis during 2018, which is boosting private insurance spending (the main part of revenue for many private healthcare providers).
- Bed density in Saudi Arabia is 2.5x lower than the OECD average and there will be an estimated shortage of c. 10,000 beds by 2025, according to Colliers International; addressing this will require substantial investment, paving the way for further expansion.
- Foreigner-friendly ownership rules. In 2017, the government allowed healthcare companies to be fully foreign-owned, which is likely to bring more investments into the country as domestic players are expanding rapidly.

Main risk factors:

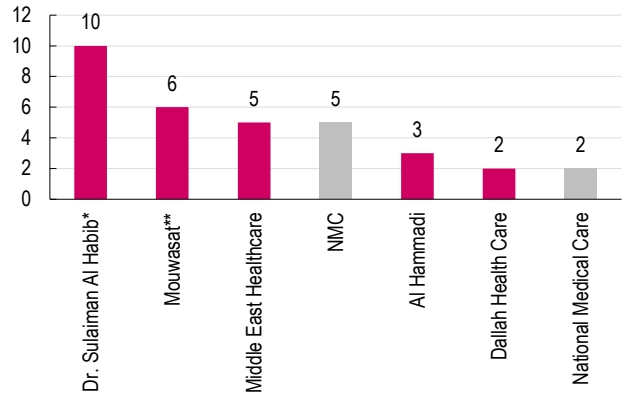
- Lower physician density and nurse-to-physician ratio than the OECD average; given growing demand and the Saudisation policy this could create problems in attracting qualified foreign doctors and nurses.

- The introduction of VAT and increases in gas prices will result in higher household costs, potentially reducing the amount of household budgets available for medical services.

- Higher austerity given the rising cost of healthcare (medical inflation was in the 5-12% range in the GCC in 2017) may result in employers downgrading employees' insurance coverage, which, coupled with expansion to less affluent geographical areas of the country may lead to margin-dilution for healthcare service providers.

- High amount of receivables from the state. This issue was especially acute for private companies with significant state exposure (e.g. National Medical Care generates 35% of revenue from the General Organisation of Social Insurance [GOSI]). From November 2017, the government installed a new invoicing payment system managed by an insurance company – GlobeMed – to deal with all invoices from private healthcare providers, with a maximum six- to nine-month payment, making the receivables issue less acute.

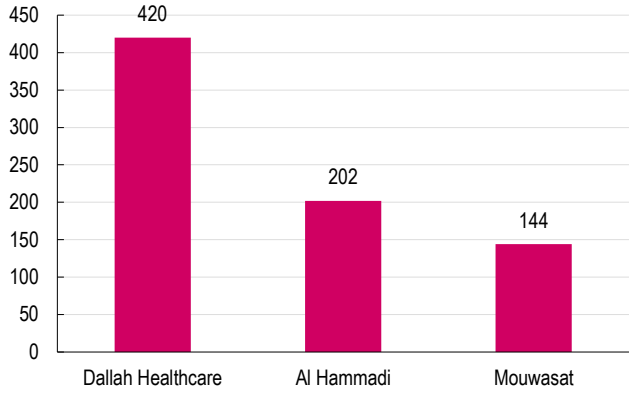
Figure 108: Saudi HC providers by number of hospitals in 2017



*Best estimate for the number of beds from publicly available sources, which includes the under-construction Al-Habib Medical City, Al-Khobar Hospital and two hospitals in Jeddah.
**Includes the under-construction Mouwasat Hospital Al Khobar (220 beds).

Source: Company data

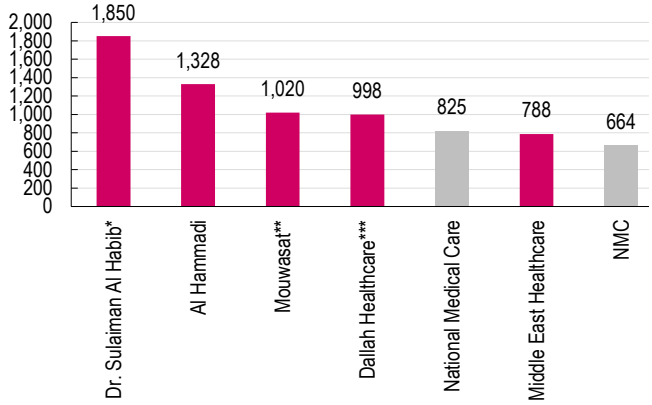
Figure 109: Saudi HC providers by number of clinics in 2017



Source: Company data

The private healthcare market in Saudi Arabia comprises both public and private players, some of which have developed into regional leaders in their fields. Among publicly traded companies are: Al Mouwasat Medical Services (Mouwasat), National Medical Care (in process of forming JV with NMC), Al Hammadi, Dallah Healthcare and Middle East Healthcare. In addition to these companies, there are a number of strong unlisted private players: Dr. Sulaiman Al Habib Medical Group (one of the largest private healthcare providers in the GCC, with numerous facilities across Saudi Arabia, Bahrain and the UAE, which is currently developing Al-Habib Medical city – one of the largest medical cities in Saudi Arabia); Elaj Group with medical centres in Egypt, Qatar, the UAE and Saudi Arabia; and Magrabi Hospitals and Centres with 15 clinics and nine hospitals across Saudi Arabia, the UAE, Egypt, Qatar, Oman and Yemen.

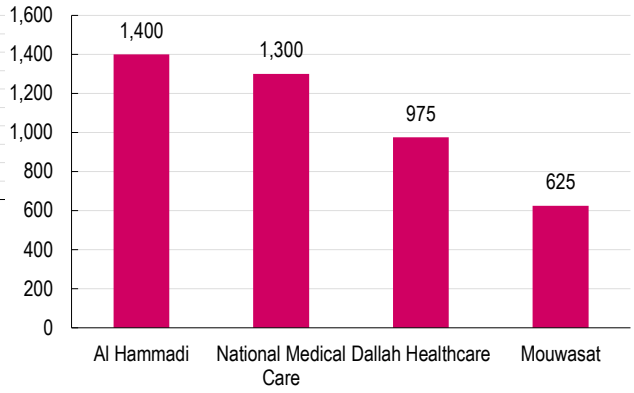
Figure 110: Saudi HC providers by bed capacity in 2017



*Best estimate for the number of beds from publicly available sources, which includes the under-construction Al-Habib Medical City, Al-Khobar Hospital and two hospitals in Jeddah.
**Includes the under-construction Mouwasat Hospital Al Khobar (220 beds).
***Includes the expansion of Dallah Hospital Al-Nakheel by 150 beds and the development of Namar Hospital (400 beds).

Source: Company data

Figure 111: Saudi HC providers by approximate average price per patient in 2017, SAR



Source: Company data

Al Hammadi

Figure 112: Snapshot of Al Hammadi

MktCap, $mn	942
Listing	Saudi Stock Exchange (since July 2014)
Average trading volume, $mn	1.7
Shareholders	
Feasibility Med Opportunity	21.0%
Al Hammadi family	29.8%
Free float	49.2%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

The company currently operates three hospitals in Riyadh with 1,328 beds, 202 outpatient clinics and trading medical tools. In 2017, the company started operating its third hospital in Riyadh, which boosted capacity by 64 clinics, 600 beds and 38 surgery rooms. During 2013-2017, Al Hammadi demonstrated a c. 13% top-line CAGR with revenue of SAR709mn in 2017 (up 17% YoY) due to better contractual terms with customers (predominantly insurance companies), increasing demand and organic expansion. The company derives most of its revenue from the private sector (c. 80%). Its recently opened hospital in the north of Riyadh is expected to boost the company's revenue by 10% YoY in 2018 and 2017-2020E revenue CAGR is expected to print at 19%, according to Bloomberg consensus. However, expected EBITDA margins may be diluted on the back of initial operating losses of the new hospital (c. SAR18mn of negative EBITDA impact in 2018 is estimated by the company's management), with a potential gradual improvement from 2020 as the new hospital reaches breakeven.

The bottom line was down c. 16% from the 2014 level to SAR108mn in 2017, as a result of an increased debt burden in 2016-2017 due to commissioning of Al-Suwaidi and Al-Nuzha hospitals. According to consensus, net debt/EBITDA is set to fall from 1.7x in 2017 to 1.3x by 2020, leading to margin improvement and 1.5x higher FCF. The stock trades close to its two-year lows (SAR29.5).

Figure 113: Al Hammadi financials and valuation, SARmn (unless otherwise stated)

	2014	2015	2016	2017	2018E	2019E	2020E
Revenue	482	561	606	709	835	1,008	1,204
EBITDA	145	184	156	196	219	258	319
EBITDA margin	30.1%	32.8%	25.8%	27.6%	26.2%	25.6%	26.5%
Net income	129	141	73	108	111	143	201
Net income margin	26.7%	25.2%	12.0%	15.2%	13.3%	14.2%	16.7%
EPS, SAR	1.2	1.2	0.6	0.9	1.0	1.3	1.8
DPS, SAR	0.6	0.8	0.0	0.8	0.7	0.8	1.1
Payout ratio	51%	63%	0%	83%	76%	65%	58%
Dividend yield	1.2%	1.3%	0.0%	2.0%	2.4%	2.8%	3.6%
Net debt	153	336	470	339	270	334	407
Net debt/EBITDA, x	1.1	1.8	3.0	1.7	1.2	1.3	1.3
Capex	11	9	145	197	189	100	104
FCF	145	58	neg	114	142	282	282
EV/EBITDA, x					19.2	16.0	13.0
P/E, x					33.0	25.3	17.8

Source: Bloomberg, Company data

Dallah Healthcare

Figure 114: Snapshot of Dallah Healthcare

MktCap, $mn	1,159
Listing	Saudi Stock Exchange (since December 2012)
Average trading volume, $mn	1.6
Shareholders	
Dallah AlBaraka Group	54.6%
Al Faqih Mohammed Rashid	5.2%
Free float	40.2%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

Dallah Healthcare operates two hospitals in Riyadh with 848 beds and 420 outpatient clinics providing comprehensive healthcare services through the largest private hospital in Saudi Arabia – Al Nakheel (448 beds and 220 outpatient clinics). Dallah Namar Hospital started operating in April 2018 with 400 beds and 200 clinics, providing a new growth opportunity for the company. In addition, Dallah Healthcare operates in the pharma segment and manages hospitals owned by other parties.

Further expansion plans – Al Nakheel capacity expanding by 150 beds and 30 clinics in 2Q19, geographical expansion (new hospital in Jeddah) and a ramp-up of Namar Hospital's utilisation – will be the main top-line drivers in the next couple of years, we believe. However, according to Bloomberg consensus, margins are expected to be subdued in the next few years, which could be explained by low utilisation of the new hospital, which is expected to reach breakeven within 18-24 months, according to the company's management. The stock currently trades around its two-year lows (SAR73.7), with Bloomberg consensus indicating a 17% 2017-2020E revenue CAGR.

Figure 115: Dallah Healthcare financials and valuation, SARmn (unless otherwise stated)

	2014	2015	2016	2017	2018E	2019E	2020E
Revenue	895	985	1,163	1,212	1,293	1,521	1,961
EBITDA	190	227	281	379	360	424	535
EBITDA margin	**21.2%**	**23.0%**	**24.1%**	**31.3%**	**27.8%**	**27.9%**	**27.3%**
Net income	147	165	225	295	246	316	415
Net income margin	**16.4%**	**16.8%**	**19.3%**	**24.3%**	**19.0%**	**20.8%**	**21.2%**
EPS, SAR	2.5	2.8	3.8	5.0	4.5	5.4	6.9
DPS, SAR	0.8	1.5	2.0	2.5	2.3	2.6	3.4
Payout ratio	32%	53%	52%	50%	50%	47%	49%
Dividend yield	**1.0%**	**1.6%**	**2.5%**	**2.4%**	**3.1%**	**3.5%**	**4.6%**
Net debt	5	162	295	445	775	1,052	1,152
Net debt/EBITDA, x	0.0	0.7	1.1	1.2	2.2	2.5	2.2
Capex	235	190	316	431	462	445	293
FCF	neg	24	25	neg	nm	nm	nm
EV/EBITDA, x					**14.5**	**12.1**	**9.4**
P/E, x					**22.0**	**16.3**	**12.3**

Source: Bloomberg, Company data

Mouwasat

Figure 116: Snapshot of Mouwasat

MktCap, $mn	2,261
Listing	Saudi Stock Exchange (since September 2009)
Average trading volume, $mn	1.2
Shareholders	
Al Saleem Mohammed Bin Sulaiman Mohammed	17.5%
Al Subaiey MOHD Sultan	35.0%
Free float	47.5%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

The company has the largest geographical presence among the listed healthcare companies in Saudi Arabia, operating five hospitals in Riyadh, Medinah, Jubail, Qatif and Damman, with 800 beds and around 144 clinics. A sixth hospital, in Khobar, with 220 beds and 100 clinics, is under development and management expects it to start operating by year-end.

The company has demonstrated a strong performance in the past few years (16% 2014-2017 revenue CAGR), with profitability improvement and expansion across the country. According to Bloomberg consensus, the top line will keep its historical pace of growth and amount to SAR2.4bn in 2020, likely supported by further hospital expansion and improvements in utilisation, in our view. The stock price is up c. 12% YtD and trades near to its two-year highs (SAR85).

Figure 117: Mouwasat financials and valuation, SARmn (unless otherwise stated)

	2014	2015	2016	2017	2018E	2019E	2020E
Revenue	970	1,000	1,243	1,507	1,703	1,985	2,338
EBITDA	276	289	364	463	516	581	684
EBITDA margin	**28.4%**	**28.9%**	**29.3%**	**30.7%**	**30.3%**	**29.3%**	**29.3%**
Net income	221	209	256	336	368	406	483
Net income margin	**22.7%**	**20.9%**	**20.6%**	**22.3%**	**21.6%**	**20.5%**	**20.6%**
EPS, SAR	2.2	2.1	2.6	3.4	3.7	4.1	4.8
DPS, SAR	1.0	1.0	1.3	1.5	1.8	1.9	2.3
Payout ratio	45%	48%	49%	45%	50%	48%	48%
Dividend yield	**1.9%**	**1.5%**	**2.0%**	**2.0%**	**2.2%**	**2.3%**	**2.7%**
Net debt	129	216	311	322	566	642	951
Net debt/EBITDA, x	0.5	0.7	0.9	0.7	1.1	1.1	1.4
Capex	275	168	235	295	354	290	307
FCF	13	42	71	160	140	224	290
EV/EBITDA, x					**17.5**	**15.6**	**13.5**
P/E, x					**22.9**	**20.7**	**17.9**

Source: Bloomberg, Company data

National Medical Care

Figure 118: Snapshot of National Medical Care

MktCap, $mn	596
Listing	Saudi Stock Exchange (since March 2013)
Average trading volume, $mn	2.2
Shareholders	
GOSI	35.1%
Free float	64.9%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

With regard to National Medical Care, we highlight a potential deal with NMC Health that could create the largest private healthcare player in terms of bed capacity (1,489 beds) with a broad country presence – with three hospitals in Riyadh and four in Jeddah, Najran, Al Khobar and Ha'il. Under the proposed deal, NMC Health would transfer its Saudi Arabian assets to the newly established JV and the General Organisation of Social Insurance (GOSI – National Medical Care's main shareholder) would transfer its stake to the same JV at c. SAR70/share. NMC would hold a c. 51% stake in the JV and GOSI would hold c. 49%. The deal is subject to regulatory approval, but we believe if it goes ahead it could potentially provide further growth opportunities for NMC.

Figure 119: National Medical Care financials and valuation, SARmn (unless otherwise stated)

	2014	2015	2016	2017	2018E	2019E	2020E
Revenue	734	879	901	855	935	1,039	1,208
EBITDA	142	187	145	172	201	237	265
EBITDA margin	**19.3%**	**21.3%**	**16.1%**	**20.1%**	**21.5%**	**22.8%**	**21.9%**
Net income	94	131	50	86	110	135	174
Net income margin	**12.8%**	**14.9%**	**5.6%**	**10.1%**	**11.8%**	**12.9%**	**14.4%**
EPS, SAR	2.1	2.9	1.1	1.9	2.5	3.0	3.9
DPS, SAR	1.6	1.6	0.8	1.0	1.2	1.6	2.1
Payout ratio	74%	53%	67%	52%	48%	53%	55%
Dividend yield	**2.3%**	**2.6%**	**1.3%**	**2.1%**	**2.4%**	**3.2%**	**4.3%**
Net debt	18	126	115	77	199	269	353
Net debt/EBITDA, x	0.1	0.7	0.8	0.4	1.0	1.1	1.3
Capex	89	53	58	73	140	69	68
FCF	neg	neg	45	37	273	141	171
EV/EBITDA, x					**11.4**	**10.0**	**9.1**
P/E, x					**21.7**	**18.6**	**14.3**

Source: Bloomberg, Company data

Middle East Healthcare

Figure 120: Snapshot of Middle East Healthcare

MktCap, $mn	1,018
Listing	Saudi Stock Exchange (since March 2016)
Average trading volume, $mn	3.6
Shareholders	
Battergee Medical House Co	54.7%
IFC	8.4%
Free float	36.9%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg

The company is the largest private healthcare provider in Saudi Arabia in terms of sales and positions itself at the upper price range of service providers, with five hospitals across the country. However, the EBITDA margin has been under pressure during the past few years due to continuing expansion and dropped by 6.5 ppts to 21.6% in 2017. The company recently announced a series of expansion plans (construction of a new hospital in Makkah, extending hospitals in Riyadh), bringing bed capacity to around 590 beds and more than 200 clinics by YE21.

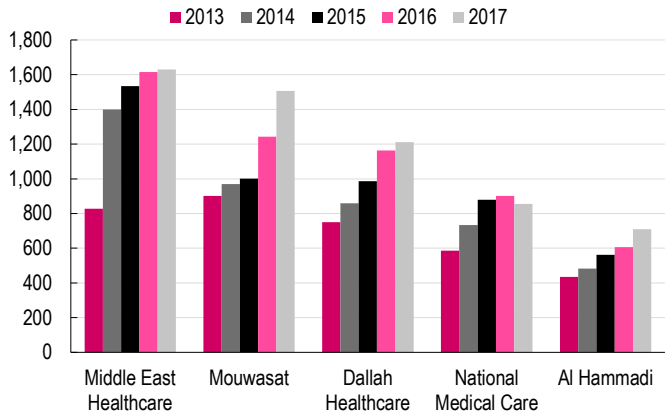
The stock is currently trading at all-time lows (SAR41.5) and at a 29% and 44% discount to its local peers on EV/EBITDA and P/E, respectively. It may be that a potential re-acceleration of growth post its heavy investment is not yet being priced in by the market.

Figure 121: Middle East Healthcare financials and valuation, SARmn (unless otherwise stated)

	2014	2015	2016	2017	2018E	2019E	2020E
Revenue	1,399	1,535	1,616	1,629	1,589	1,765	1,915
EBITDA	358	431	422	352	390	449	459
EBITDA margin	**25.6%**	**28.1%**	**26.1%**	**21.6%**	**24.5%**	**25.4%**	**24.0%**
Net income	322	390	363	300	312	324	334
Net income margin	**23.0%**	**25.4%**	**22.4%**	**18.4%**	**19.6%**	**18.4%**	**17.4%**
EPS, SAR	4.3	4.3	3.9	3.3	3.4	3.6	3.7
DPS, SAR	0.0	0.0	0.0	0.0	2.2	2.2	2.3
Payout ratio	0%	0%	0%	0%	63%	61%	62%
Dividend yield	**na**	**na**	**nm**	**nm**	**5.2%**	**5.4%**	**5.5%**
Net debt	27	113	160	193	270	334	407
Net debt/EBITDA, x	0.1	0.3	0.4	0.5	0.7	0.7	0.9
Capex	110	83	68	59	196	272	238
FCF	233	100	185	282	126	132	138
EV/EBITDA, x					**10.4**	**9.0**	**8.8**
P/E, x					**12.5**	**11.8**	**11.5**

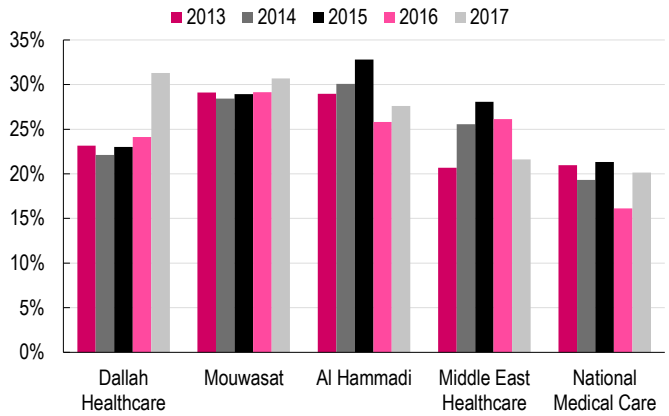
Source: Bloomberg, Company data

Figure 122: Top private healthcare providers in Saudi Arabia in terms of sales in 2017, SARmn



Source: Bloomberg

Figure 123: EBITDA margin dynamics of top private healthcare providers in Saudi Arabia



Source: Company data

Romania

MedLife is Romania's largest private healthcare provider, with the best nationwide coverage, giving it wide economies of scale.

Figure 124: Snapshot of MedLife

MktCap, $mn	155
Listing	Bucharest Stock Exchange (since December 2016)
Average trading volume, $mn	0.04
Shareholders	
Marcu family	45.6%
IFC	4.5%
Free float	49.9%

Note: Prices as of market close on 30 August 2018.

Source: Bloomberg, Company data

Main positives:

- Romania's underfunded public healthcare system, with poor service quality and a lack of specialised equipment, coupled with rising disposable income and low healthcare spending per capita (c. 4x lower than the OECD average), bodes

well for an increase in private healthcare spending, with an expected 2017-2020E CAGR of 10%, according to BMI.

- Unlike hospitals, which are mainly state-owned, outpatient services, laboratory tests and stomatology rely heavily on out-of-pocket spending, which in turn should be supported by higher per-capita income.

- MedLife holds the largest portfolio of corporate health prevention package (HPP) clients in Romania, paving the way for it to capture additional revenue by attracting these patients to its other healthcare services.

- There are only three sizeable private healthcare players in Romania, with MedLife having the widest offering of services vis-à-vis its more specialised (ophthalmology, stomatology, etc.) peers, providing further M&A scope for MedLife, in our view.

- Organic growth, focused on deriving synergies from earlier acquisitions and ramping up their utilisation levels. We also see room to increase the average price for services.

- At present, there is no private health insurance system in Romania that could serve as additional booster for private healthcare spending.

Main risk factors:

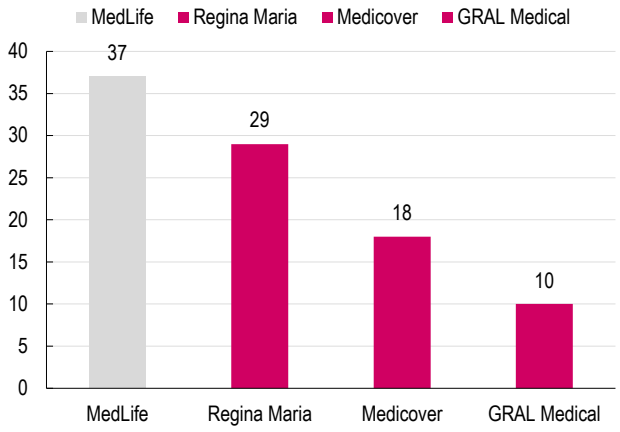
- The country's low physician density, exacerbated by workforce migration, along with increased wages for medical personnel in public sector, makes it difficult to attract qualified medical specialists.

- Around 90% of the company's debt is euro-denominated, while its revenue is mainly in local currency. Given its high debt level (c. 2x higher than the industry average), unfavourable FX fluctuations could have a significant impact on the bottom line.

- Potential to overpay for acquisition targets due to intensifying competition in the country.

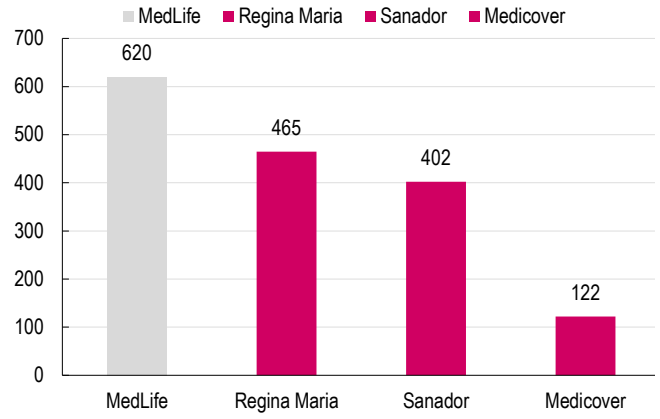
MedLife is the largest private healthcare provider in Romania, with 46 medical facilities in Bucharest and 67 facilities in the rest of the country. The company is also one of the largest private healthcare providers in Central and Eastern Europe in terms of sales. The company is run by its original founders – the Marcu family – who are also the largest shareholders, with a combined stake of 45.6% as of June 2018.

Figure 125: Top healthcare providers in terms of outpatient clinics in Romania in 2016



Source: PMR Report

Figure 126: Top private healthcare providers in Romania in terms of bed capacity in 2016



Source: PMR Report

The company runs a diversified business model offering clients a full range of healthcare services from laboratory tests (18% of 1H18 revenue) to outpatient clinical services (29% of 1H18 revenue), inpatient hospitals (20% of 1H18 revenue), stomatological services and pharmacies. Meanwhile, it provides healthcare services in both the public and private segments, although the state's contribution through the National Health Insurance Fund (NHIH) remains small, hovering around 15% of total revenue.

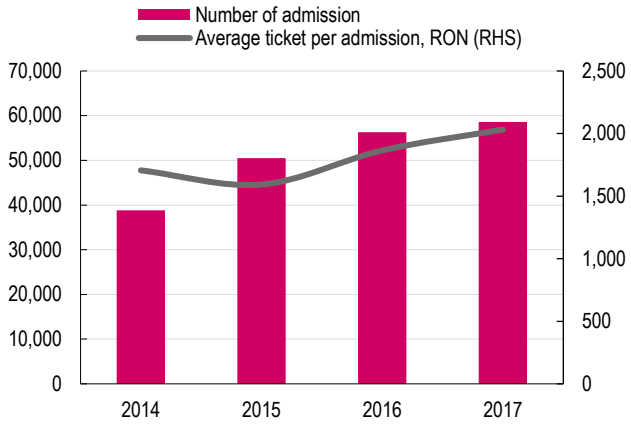
The hospitals business segment covers inpatient services with a wide range of medical and surgical specialisations, including maternity. In 2017, the company operated nine hospitals with six inpatient hospitals and three day-inpatient ones (which more closely resemble well-equipped clinics, with a lower ticket than normal hospitals). During 2013-2017, segment revenue increased at c. 20% CAGR and came in at RON121mn on the back of acquisitions and a rise in the average ticket price due to the provision of more complex treatment. In 2017, MedLife acquired European Polisano Hospital, located in Sibiu (one of the more modern hospitals in Romania) and, we believe, the company plans to continue its M&A expansion. Revenue of this segment mainly comes from out-of-pocket payments by patients, while treatment of state-insured patients, predominantly relating to maternity, gynaecology and cardiology, represented c. 26% of the segment's sales in 2015-2017.

During 2017, MedLife expanded its outpatient segment by adding 16 clinics through the acquisition of the entire stake in Polisiano's medical service division (four clinics in Bucharest and Sibiu), a 100% stake in Anima Promovare si Vanzari S.R.L. and the opening of a hyperclinic in Brasov, boosting its chain to 53 facilities that also saw their main revenue come from out-of-pocket patients (c. 12% from public sector). Despite the average ticket price for its services remaining flat for the past couple of years, due to expansion to regions with lower fees for services, the segment's revenue demonstrated around a 22% 2013-2017 CAGR and amounted to RON173mn in 2017. We expect the segment to maintain double-digit growth for the next five years, supported by further acquisitions and organic development, along with a probable increase in fees as the company invests in medical infrastructure at new clinics.

MedLife is a leading player in the laboratories segment, providing such services as biochemistry, hematology, immunology, microbiology, etc. Its labs serve external clients as well as the company's own facilities (c. 15% of revenue comes from NHIH). In 2017, the company operated 29 laboratories and 143 sampling points. During 2013-2017 the segment's revenue CAGR amounted to c. 21%, mainly driven by acquisitions (in 2016, the company acquired a 100% stake in DIAMED, which was being used as a launching base for the Sfanta Maria laboratories brand, targeting the low- to medium-end market). In 2014, the public system expanded the number of services included in the basic medical

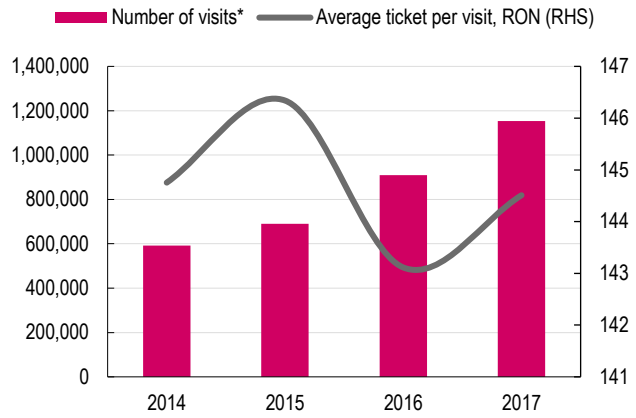
package and the Ministry of Health intends to allocate more funds in this field in the coming years – which in turn, coupled with its well-developed sampling point chain, could facilitate future strong revenue growth for MedLife, in our view.

Figure 127: MedLife hospital segment development



Source: Company data

Figure 128: MedLife clinic segment development



*Ex. stomatology segment.

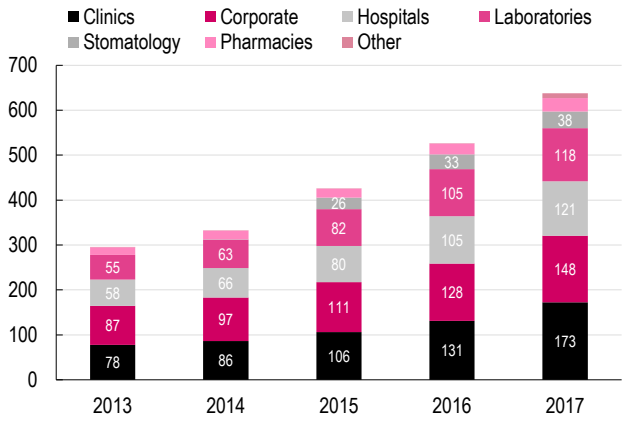
Source: Company data

The corporate business segment offers health prevention packages (HPP) on a subscription basis to corporate clients (c. 15% of 1H18 revenue). This programme complements the legally required occupational health services that corporate clients buy from the company as the standard HPP. The package covers predominantly outpatient services – other services are paid for by the employees themselves (typically with a discount granted to maintain loyalty). This segment has strong synergies with clinics, hospitals and laboratories and is used to channel patients into MedLife's other clinics and services. According to a PMR report, MedLife has a portfolio of over 570,000 HPP patients, which is the largest in Romania, generating a predictable, euro-denominated cash flow, providing a natural currency hedge (other revenue segments are denominated in local currency). During 2013-2017, segment revenue demonstrated a c. 14% CAGR and amounted to RON148mn in 2017. We expect the segment's pace of growth to slow to the mid-to-high single digits in the next five years, as the opportunity to obtain contracts with large corporates (the most profitable clients) diminishes.

MedLife also operates in stomatology, pharmacies and other segments, whose share in total revenue amounted to c. 11% in 1H18. Despite its small size in total revenue (6% in 1H18), the stomatology segment offers high growth potential in the future, we believe. The number of private dental clinics has been growing consistently over the past 10 years, while the number of state-owned clinics has been declining, which we think bodes well for MedLife to take advantage of higher market concentration. In 2016, the company acquired a 60% stake in DENT ESTET and became the leader in this highly fragmented segment. The acquisition added eight clinics and the capability to provide orthodontics and oral implants services, which generate significantly higher fees than regular check-ups.

In 2017, MedLife operated 10 pharmacies located in its hyperclinics, aiming to upsell medication onsite. The company does not intend to develop pharmacies outside of its network, as the number of licences are limited. Pharmacies contributed c. 5% (RON17.4mn) to 1H18 revenue and this share, we believe, is likely to be maintained in the future.

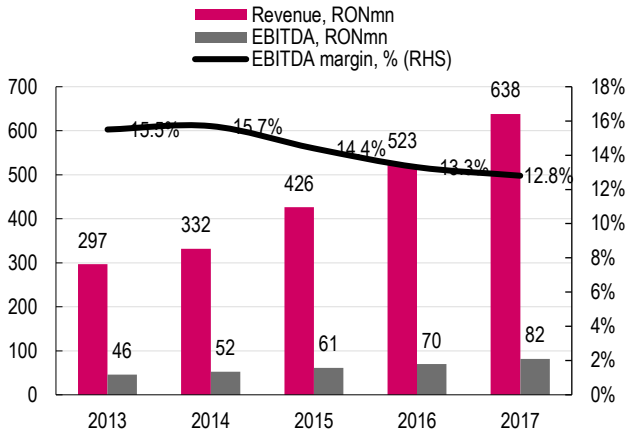
Figure 129: MedLife's revenue structure, RONmn



Note: Financials in 2015-2017 were calculated on a pro forma basis.

Source: Company data

Figure 130: MedLife revenue and EBITDA dynamics



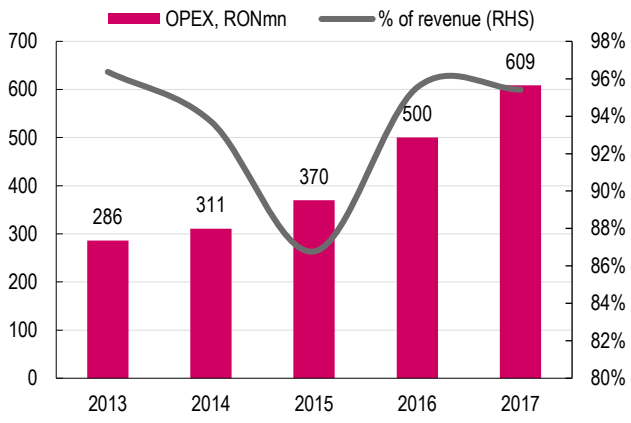
Note: Financials in 2015-2017 were calculated on a pro forma basis.

Source: Company data

During 2013-2017, operating expense dynamics were in line with revenue growth (c. 21% CAGR). Owing to significant M&A activity in the past few years, the EBITDA margin declined to 12.8% in 2017, from 15.5% in 2013.

Personnel expenses represented c. 32% of total operating expenses in 1H18. Over the past decade, Romania has seen an outflow of both doctors and nurses as a result of low local wages in the country. Romania's relatively high (compared with our sample of countries) nurse-to-doctor ratio of c. 2.3x is still below OECD average levels (2.8x), suggesting a shortage of nurses, while MedLife had an even lower ratio of c. 0.7x in 2017, which can probably be explained by its high number of clinics vs hospitals. Apart from that, the company is significantly exposed to wage inflation due to high personnel expenses in its cost structure (c. 60% incl. third-party expenses in 1H18). We expect these costs will continue to pressure the company's margin in the next couple of years (c. 23% 2013-2017 CAGR). The second-biggest cost item is materials, which accounted for c. 16% of total operating expenses in 1H18. During 2013-2017 this cost line demonstrated a c. 18% CAGR.

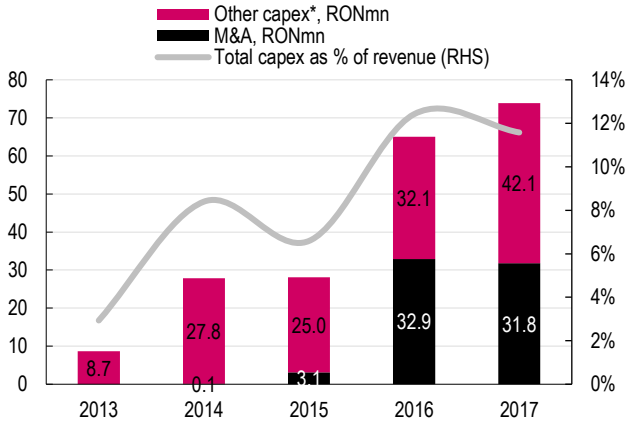
Figure 131: MedLife's operating expense dynamics



Note: Numbers for the 2015-2017 period were calculated on a pro-forma basis.

Source: Company data, Renaissance Capital estimates

Figure 132: MedLife's capex breakdown



*Incl. investments in PP&E and intangible assets.

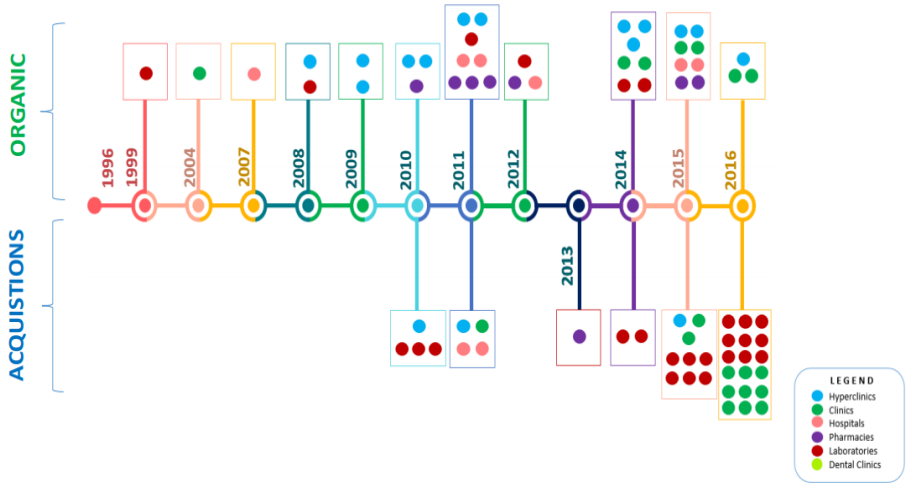
Note: Numbers for the 2015-2017 period were calculated on a pro-forma basis.

Source: Company data, Renaissance Capital estimates

The business model is a combination of organic growth of services, greenfield expansion into Romania's smaller towns and M&A. The most notable projects in the past two years in terms of organic growth have been the opening of a new hyperclinic in Ploiesti; consolidation of its leadership position in Brasov by expanding bed capacity (+18 beds), as well as the opening of a new hyperclinic and laboratory in the town, with total

investments of EUR1.3mn; and investments in the new stomatology clinic in Bucharest (EUR850,000). The company is a leading market consolidator in private healthcare, completing more than 12 deals over eight years.

Figure 133: MedLife's organic growth and acquisitions



Source: Company data

In 1H18, MedLife continued its expansion through acquisitions in the hospital, clinic and laboratory segments. In addition, the company managed to achieve organic development, expanding its bed capacity by 81 beds and two surgical rooms over its four hospitals and opening its first hyperclinic in Oradea. The company is also continuing to invest in high-margin imaging services. As a result, 1H18 LfL revenue growth amounted to 11.6% YoY, vs c. 10% YoY for the overall market, while on a pro-forma basis revenue increased by 32.9% YoY to RON400.3mn. The EBITDA margin was flattish in 1H18 and printed at 12%. The company is seeking potential M&A opportunities and expects them to continue complementing its organic expansion, according to management. We expect the company will continue to derive synergies from acquisitions via business integration, and to develop complex treatments and other high-margin segments such as stomatology.

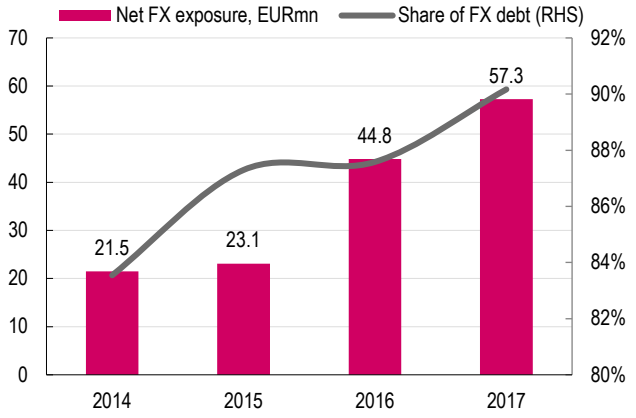
Figure 134: MedLife 1H18 acquisitions

Year	Target	Type	Segment	Description
Apr-18	100% shares in Polisano (approved by the Competition Council in April 2018)	Acquisition	Hospitals/Clinics/ Laboratories	4 clinics with its own laboratories located in Bucharest and Sibiu; 1 hospital – the European Polisano Hospital located in Sibiu - recognised as one of the most modern and performing hospital units in Romania; 1 in vitro fertilisation center and 1 private maternity
May-18	90% shares in Ghencea Medical Center	Acquisition	Clinics	2 clinics with its own laboratories located in Bucharest and Magurele
May-18	80% shares in Solomed Group	Acquisition	Clinics/Laboratories	6 clinics located in Pitesti, Curtea de Arges and Costesti and 1 laboratory
Jun-18	100% shares in the medical platform SfatulMedicului.ro	Acquisition	IT	The platform has a monthly average of over 3.2mn unique visitors and over 12mn impressions. Aside from the information service, users choose this platform to access the medical self-assessment service and online test interpretation.

Source: Company data

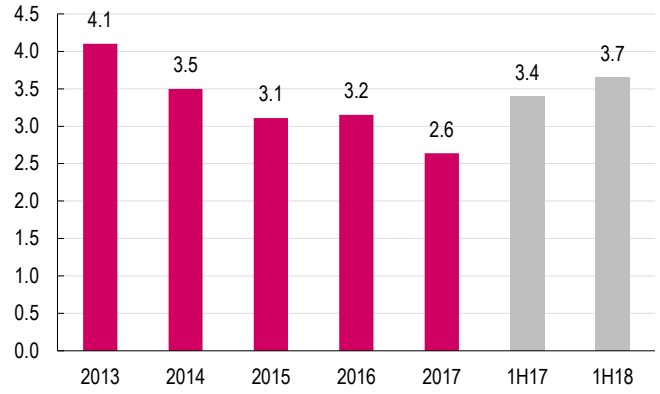
The company derives the majority of its revenue in Romanian lei (c. 85% of total revenue), while some of its costs and debt are euro-denominated. As a result, the company has significant exposure to FX fluctuations. MedLife's net debt/EBITDA ratio is 2x+ higher than the sector average – which, in turn, may limit further M&A activity and discipline management to choose M&A targets more carefully. As of 1H18, Med Life's net debt/EBITDA stood at 3.7x, vs 3.4x in 1H17.

Figure 135: MedLife's FX exposure



Source: Company data, Renaissance Capital estimates

Figure 136: MedLife's net debt/EBITDA dynamics, x



Note: numbers for 2015-17 period were calculated on the pro forma basis

Source: Company data, Renaissance Capital estimates

On Bloomberg consensus forward-looking numbers (there are only two providers of estimates), MedLife is expected to deliver 22% EBITDA and 105% earnings growth in 2018 and is currently trading on 2018E 9.8x EV/EBITDA and 29.6x P/E multiples. These are at discounts of c. 41% and 11% to the sector average, respectively. However, these multiples are at a premium to Turkish, Russian and Georgian healthcare companies. We see the potential for MedLife to grow EBITDA in the mid-teens organically, owing to increases in disposable income and regional expansion, as well as the development of niche areas such as dentistry.

Figure 137: Financials and valuation, RONmn (unless otherwise stated)

	2017 pro-forma	2018E	2019E	2020E
Revenue	638	808.0	930.5	1,022.0
EBITDA	81.7	99.4	121.0	141.0
EBITDA margin	12.8%	12.3%	13.0%	13.8%
Net income	10.2	20.9	34.7	47.2
Net income margin	1.6%	2.6%	3.7%	4.6%
Capex*	42.1	63.1	66.3	70.9
Net debt	215.0	283.0	264.0	229.0
Net debt/EBITDA, x	2.6	2.8	2.2	1.6
EV/EBITDA, x		**9.8**	**8.0**	**6.8**
P/E, x		**29.6**	**17.8**	**11.5**

*Ex. M&A.

Source: Company data, Bloomberg

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Renaissance Capital research team

Head of Research – Eurasia	Daniel Salter	+44 (207)	005-7824	DSalter@rencap.com
Head of Research – Africa	Johann Pretorius	+27 (11)	750-1450	JPretorius2@rencap.com
Head of Research – Sub-Saharan Africa	Yvonne Mhango	+27 (11)	750-1488	YMhango@rencap.com
Head of Research – MENA	Ahmed Hafez	+20 (122)	774-4911	AHafez@rencap.com

Name	Telephone number		Coverage
Macro			
Charles Robertson	+44 (207)	005-7835	Global
Yvonne Mhango	+27 (11)	750-1488	Sub-Saharan Africa
Oleg Kouzmin	+7 (495)	258-7770 x4506	Russia/CIS
Equity Strategy			
Daniel Salter	+44 (207)	005-7824	Global
Charles Robertson	+44 (207)	005-7835	Global
Vikram Lopez	+44 (207)	005-7974	Global
Fixed Income Strategy			
Gregory Smith	+44 (207)	005-7761	Frontier/Emerging Markets
Oleg Kouzmin	+7 (495)	258-7770 x4506	Russia/CIS
Financials			
Ilan Stermer	+27 (11)	750-1482	South Africa
Phago Rakale	+27 (11)	750-1498	South Africa
Olamipo Ogunsanya	+234 (1)	448-5300 x5368	Sub-Saharan Africa
Metin Esendal	+44 (207)	005-7925	Europe/Georgia
Oluwatoyosi Oni	+234 (1)	448-5300 x5356	Sub-Saharan Africa
Ivan Kachkovski	+44 (207)	005-7862	Russia
Consumer/Retail/Agriculture			
David Ferguson	+7 (495)	641-4189	Russia/CIS, Africa
Kirill Panarin	+7 (495)	258-7770 x4009	Russia/CIS, Africa
Zaheer Joosub	+27 (11)	750-1427	South Africa
Adedayo Ayeni	+234 (1)	448-5390	Sub-Saharan Africa
Robyn Collins	+27 (11)	750-1480	South Africa
Metin Esendal	+44 (207)	005-7925	Turkey
Hadeel El Masry	+01(00)	388-0822	MENA
Healthcare			
Robyn Collins	+27 (11)	750-1480	South Africa
Alexander Kazbegi	+41 (78)	883-4527	Georgia/Russia
Metin Esendal	+44 (207)	005-7925	Turkey

Name	Telephone number		Coverage
Oil & Gas			
Alexander Burgansky	+44 (207)	005-7982	Russia/CIS, Africa
Temilade Aduroja	+234 (1)	448-5300 x5363	Sub-Saharan Africa
Oleg Chistyukhin	+7 (495)	258-7770 x4073	Russia/CIS
Metals & Mining			
Johann Pretorius	+27 (11)	750-1450	South Africa
Steven Friedman	+27 (11)	750-1481	South Africa
Kabelo Moshesha	+27 (11)	750-1472	South Africa
Siphelele Mhlongo	+27 (11)	750-1420	South Africa
Derick Deale	+27 (11)	750-1458	South Africa
Telecoms/Transportation			
Alexander Kazbegi	+41 (78)	883-4527	Global
Artem Yamschikov	+7 (495)	258-7770 x7511	Russia/CIS
Mikhail Arbuzov	+7 (495)	258-7770 x4594	Russia/CIS
Metin Esendal	+44 (207)	005-7925	Pakistan
Real Estate			
David Ferguson	+7 (495)	641-4189	Russia/CIS, Africa
Kirill Panarin	+7 (495)	258-7770 x4009	Russia/CIS, Africa
Phago Rakale	+27 (11)	750-1498	South Africa
Media/Technology			
David Ferguson	+7 (495)	641-4189	Russia/CIS, Africa
Kirill Panarin	+7 (495)	258-7770 x4009	Russia/CIS, Africa
Diversified/Industrials			
Brent Madel	+27 (11)	750-1160	South Africa
Metin Esendal	+44 (207)	005-7925	Turkey
Materials			
Temilade Aduroja	+234 (1)	448-5300 x5363	Sub-Saharan Africa
Utilities			
Ahmed Hafez	+20 (122)	774-4911	Egypt
Sergey Beiden	+7 (495)	258-7770 x4205	Russia

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Renaissance
Capital

Renaissance Capital
Moscow
T + 7 (495) 258-7777

Renaissance Capital Ltd.
London
T + 44 (203) 379-7777

Renaissance Capital
Johannesburg
T +27 (11) 750-1400

Renaissance Securities (Nigeria) Ltd.
Lagos
T +234 (1) 448-5300

Renaissance Capital
Nairobi
T +254 (20) 368-2000

Renaissance Capital
Cape Town
T +27 (11) 750-1164

Renaissance Securities (Cyprus) Ltd.
Nicosia
T + 357 (22) 505-800

Renaissance Capital
Dubai
T +971 (4) 409-2000

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