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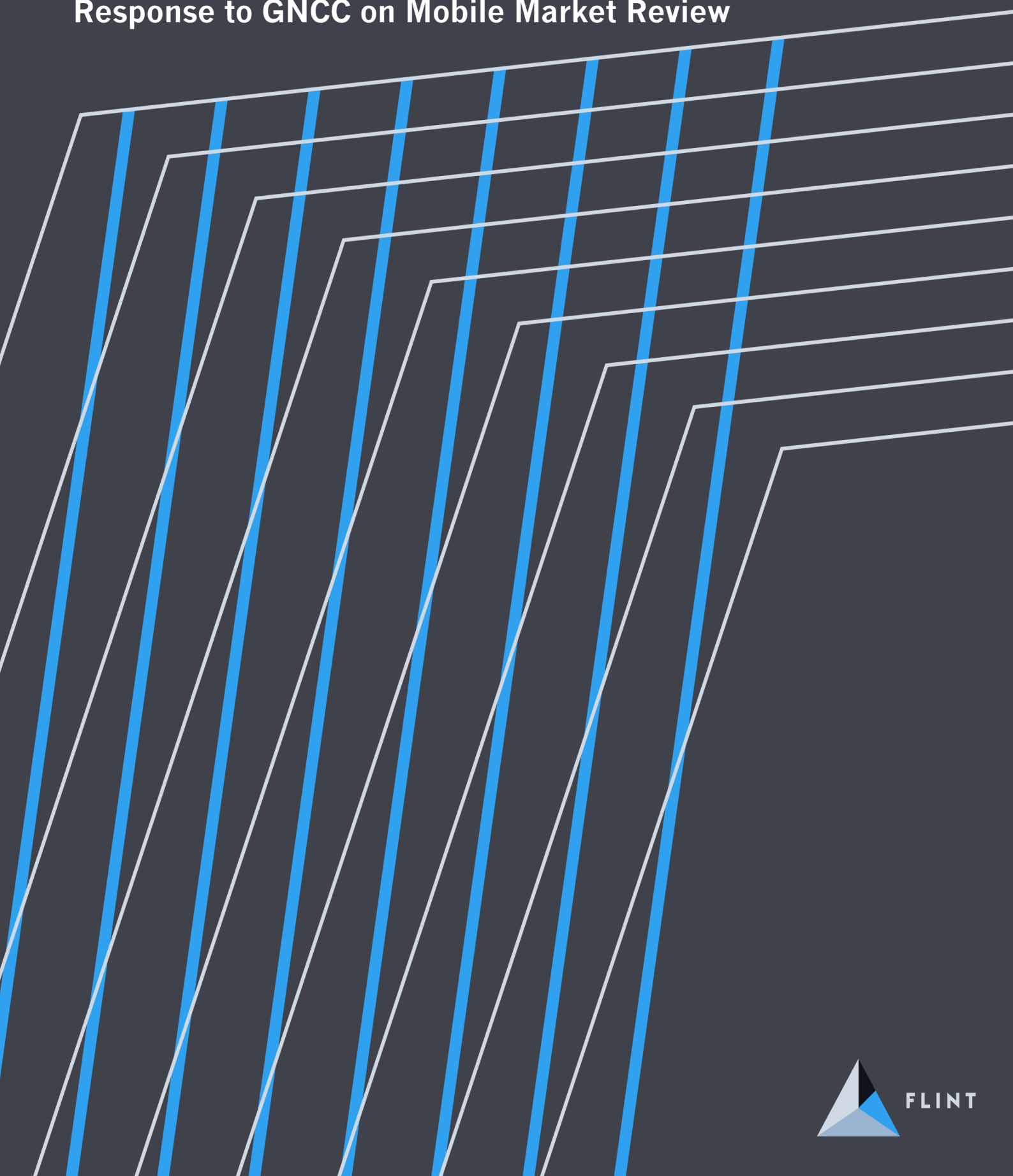
Response to GNCC on Mobile Market Review



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Executive Summary

We have been asked by Magticom to review the Georgian National Communications Commission (GNCC, or ComCom)'s April 2024 consultation entitled "Market review of the Mobile market".

We believe that GNCC has failed to consider several important aspects of the Georgian mobile market, has misinterpreted other aspects, and needs to recalibrate its analysis of Magticom's financial performance to reflect strategic decisions taken in the past, and the returns legitimately expected by investors.

GNCC's SMP findings are unfounded, and proposed remedies will harm network investment

Taken together, these errors mean that the SMP findings in the consultation are unfounded, the proposed remedies that follow this finding are disproportionate, and are likely to lead to unintended consequences as they will negatively impact investment incentives in the market. Consumers and industry will be impacted as investment reduces, and network quality suffers.

Furthermore, Magticom has committed to launching a commercially negotiated MVNO in the near term, and to building and launching extensive 5G coverage as soon as appropriate spectrum is available, without mandatory MVNO restrictions.

GNCC has misinterpreted competition in the market

The high levels of multi-SIM usage mean that customers use services from multiple operators at the same time and take advantage of special offers to get the best prices, making it a highly competitive pricing environment.

The Georgian mobile market exhibits high levels of price competition between all operators – retail mobile prices are below EU averages (in most cases), particularly on data packages, while prices for business users are unequivocally lower than in the EU[1].

Prices rose across the market in the last few years as a result of GNCC's price freeze being removed. This does not mean prices are excessive or too high, rather that prices were artificially low due to the price freeze. It is worth noting that there is a currency mismatch between revenues (denominated in local currency) and equipment costs (denominated mostly in USD) in mobile markets. This is particularly relevant where prices are frozen in local currency terms at the same time that the local currency depreciated against the USD. This currency mismatch is far more acute in Georgia than in other parts of the EU.

Specific features of the Georgian mobile market have not been taken into account

MNOs in Georgia don't sell mobile phones

Across the EU, where most of the comparator data used by GNCC is taken from, MNOs act as resellers of mobile phones. In most cases, this requires subsidies in order to attract subscribers, or at best very low margins. Consequently, mobile phone makers capture a large share of the value in most EU mobile markets, and MNOs compete aggressively on handset price, resulting in lower observed margins.

In contrast, there are no handset sales/subsidies by MNOs in Georgia, which means observed margins are higher. Instead of competing on handset sales, operators in Georgia compete based on network quality and other specific service features, such as innovative pricing models that allow

[1] On a purchasing power parity (PPP) basis.

customers to pick and choose different service elements on a real-time basis. The nature of network competition requires that they have invested more in their networks than in most EU countries. The currency mismatch between revenues and equipment costs noted above is also relevant here – capex as a percentage of revenue has been pushed up by local currency depreciation against the USD. 10%-15%[2] capex/revenues is the norm in mature EU markets, whereas we see well over 20% on average in Georgia.

It is therefore misleading to claim that the Georgian mobile market lacks competition simply on the basis of higher observed margins, when in reality operators in Georgia are competing on the basis of different parameters compared to other countries.

Georgia is an emerging market, with very specific risks for investors

The economic, political and financial risks faced by investors in Georgia are materially different to other European countries. This is evidenced in the observed yields on long-dated Georgian government debt, which have averaged 11% since 2009, and have frequently exceeded 15%. This represents an average premium of 9% to UK 10-year Government yields over the same period, which have averaged only 2%. The linked risks must be appropriately reflected in any analysis of required returns for investors in Magticom's business, since investors obviously require a materially higher return to invest in Georgia compared to EU countries. The exit of all other international investors from the Georgian mobile market demonstrates that prospective and experienced returns fail to reflect risks to such an extent that investors have been prepared to take material losses to exit the market.

Higher returns are therefore reflective of the unique risks that investors face when investing in Georgia, rather than any lack of competition. Theoretical estimates of cost of capital, in the face of such significant risks, cannot be used to benchmark returns and assess excess profits in a way that is suitable for regulatory decisions.

Observed returns must be considered within a 'fair bet' framework, allowing for the risks faced at the point of investment

Regulated companies undertake investments that have potential upside and potential downside. Companies will only invest if expected returns are equal to or greater than expected costs. If a company takes on the risk that things turn out less well than expected, it should also be given the ability to benefit from the upside – otherwise rational investors will simply not invest if they know any upside will be expropriated or regulated away. This is known as the 'fair bet' regulatory framework.

A proper analysis of the financial returns observed today must therefore consider the range of possible returns anticipated *ex ante*, at the point investments were made. The consumer outcomes delivered by Magticom have been good – at the upper end of reasonable expectations – and today's financial performance partly reflects this. At the time the investments were made, however, there was also the possibility of poorer investment outcomes associated with operational performance issues and recognised political, economic and financial risks. Investors assessed these risks and potential upsides when deciding to invest, reflected in the 'average' of expected returns at the point

[2] The UK is an illustrative example of a mature mobile market, where the leading MNO, EE, invested just 8% of revenues on capex over the last 10 years, and the average across the 4 MNOs over that period was 10%.

of investment. Having borne the downside risks of achieving poorer outcomes, investors should also be allowed to earn the upside from their risky investments.

Regulators must therefore accept that Magticom's returns could *legitimately* reflect a significant premium to the true underlying cost of capital. The possibility of such returns was essential to the justification of investments made in the past. The willingness of GNCC to forbear in the presence of high apparent returns of this nature will be essential to support continued investment. Failure to do so will mean that future investors cannot realistically expect to earn returns aligned to the cost of capital and will have an inevitable chilling effect on investment in Georgian communications markets.

We have examined the cost of capital analysis by PWC and, notwithstanding our view that the 'fair bet' methodology is the appropriate means to judge returns, we consider that the analysis estimates a cost of capital which is not realistic for the industry. Our own analysis suggests an industry cost of capital of at least 20% post tax. This analysis is consistent with the actual returns demanded by investors in listed Georgian stocks, such as local banks listed on international stock exchanges. A 'fair bet' would suggest a benchmark rate of return of closer to 30%.

We have calculated Magticom's post tax return on capital employed on a replacement cost asset basis and observe an average return of 15% post tax over the period 2009 – 2023[3]. We do not consider this to be a level of return that would cause regulatory concern or potential competition issues.

Specific features of Magticom have been ignored or misinterpreted

Magticom's reported profits reflect a successful strategy

Since it started mobile services in 1997, Magticom has targeted having the best mobile network possible and has made conscious strategic decisions to invest upfront, always with the aim of providing the highest quality service to subscribers. It is a business that, at its heart, is run by network engineers, resulting in a high-quality network that is loved by subscribers.[4] The limiting factor on network quality for Magticom to date has been spectrum availability.

Magticom has historically made far-sighted upfront investments that lead to efficiencies in the medium to long term, such as buying all properties outright, developing its own billing software, and running its own network management and control (rather than outsourcing). Whenever there has been a buy versus rent option, Magticom has chosen to buy or invest upfront, in order to retain control over network quality and customer choice and to be as efficient as possible. As a result, operating costs are far lower than in all equivalent EU markets. If we consider a similar sized market such as Greece, Cosmote's reported EBITDA margin of 43% is equivalent to 63% if it was not subsidising handset sales. In addition, Cosmote spends at least 10% more on leasing, renting or outsourcing than Magticom does. So Magticom's reported 76% EBITDA margin in 2023 is very similar to that reported by Cosmote, once we take into account handset sales and outsourced costs. Cosmote and Magticom's margins are similar on a like-for-like basis, and unadjusted comparisons are highly misleading.

[3] Estimated on a current cost accounting (CCA) basis – see section 4 for more details.
[4] This can be evidenced by Magticom's latest net promoter score (NPS) analysis, where mobile network quality elicited a 77% NPS.

Magticom's actual returns are below the returns expected under a 'fair bet' regulatory framework

Investors in Magticom's business for the last fifteen years have experienced substantially lower returns than they would reasonably have expected – given the circumstances that have evolved – under a 'fair bet' arrangement. The accumulated value of the shortfall is significant.

Consideration of future interventions, and inferences made in assessing market power, must give due weight to this evidence. Investors have failed to recover fair returns. Today's profitability metrics, rather than pointing to excess returns, have some way to go, for several years, to address the historic shortfall.

Magticom stands ready to invest at a pivotal moment in the industry, but this requires regulatory certainty

Magticom is keen to build a 5G network with nationwide coverage as swiftly as possible, along with offering coverage commitments, and is keen to acquire relevant spectrum at 700 MHz, 800 MHz, 2.6 GHz and 3.6 GHz in order to be able to make that happen. Our understanding is that GNCC is prepared to auction lots in these wavebands without associated MVNO commitments, which have acted as a disincentive to invest in new networks in the past.

In order to make this type of major network investment, Magticom quite reasonably wants to understand if it will be allowed to make a reasonable return on investment. Such an investment would not make commercial sense if it had to share its new network at regulated prices[5]. Mandated MVNO access would materially reduce the expected returns from investment and is likely to make the investment unattractive.

Magticom is actively negotiating an MVNO agreement with a potential partner. However, the uncertainty created by the mobile market review has resulted in the potential partner adopting a 'wait-and-see' approach, as there is no point in it reaching a commercial agreement only to find that mandated prices are lower. Magticom is very keen to pursue a commercial MVNO route if it is allowed the freedom to do so, without the prospect of a regulatory intervention.

Most EU regulators are currently trying to encourage network investment in order to meet digital connectivity targets – GNCC is in an enviable position of having three strong mobile operators, competing vigorously on price and network quality, and offering to deliver further improvements in network quality in return for being allowed a fair return on investment. Proposing mandated MVNO access (a remedy that hasn't been implemented in the EU), as well as national roaming and co-location remedies, is disproportionate and unprecedented and will lead to lower network investment.

[5] We note that GNCC's proposes regulated prices based on a LRIC model, which would not allow recovery of fixed or common costs. LRIC-based prices tend to be used for regulated prices where there is a recognition that low prices would not overly dampen network investment incentives. An example might be mobile termination rates, which are (or were) widely regulated on the basis that consumers did not choose a mobile service provider based on how much it cost other people to call them, and therefore normal competitive forces did not act upon prices. Where investment incentives are an important factor, a more normal basis for setting prices might be a FAC (fully allocated cost), LRIC-plus, or retail minus basis, with allowance being made for full recovery of costs, including a reasonable return on investment.

This is an important moment in the industry – we would encourage GNCC to afford Magticom the opportunity to prove it can continue to deliver for subscribers with an upgraded network and even greater choice.

Table 1: Summary of GNCC's arguments and our response

GNCC's SMP criteria/remedies	Summary argument	Response
Market share >40%	Under Georgian law, there is a presumption of SMP where market share is >40%	Magticom does have a market share above 40%, driven by customer demand and high levels of satisfaction. This is not an indicator of a problem when consumers have good competitive choices.
Barriers to market entry & expansion	*'Lack of significant competition and potential competition within a forward-looking timescale of 3 years.'*	Competition is already strong between mobile operators and looks set to increase further in the next few years as 5G services are launched, and the impact of MVNOs across all operators increases (including MVNOs commercially-negotiated by Magticom).
Magticom's absolute & relative size	Compared to its competitors, Magticom is larger in terms of subscribers, revenue and profits.	GNCC simply states that Magticom is larger, which it is. This does not indicate that there is a competition problem. Rather it indicates that Magticom has followed a successful business strategy. We recognise that its success means that Magticom faces heightened regulatory scrutiny.
Magticom's control over infrastructure	Magticom's control over infrastructure is a significant factor when assessing market power.	Maintaining control over infrastructure is an important part of Magticom's customer-focused strategy, ensuring that it can deliver the best possible network quality. This is an approach that was available to all mobile networks in the market. We would also note that Magticom and Silknet have a similar number of base stations, and all three MNOs have 99% population coverage, according to GNCC's data.
No countervailing buyer power from access-seekers	GNCC appear to be suggesting that the prospects for an MVNO are weaker because potential partners don't have a strong starting position.	Rationally, we would expect Magticom to launch an MVNO (or MVNOs) when it is clear that the benefits (e.g. greater consumer reach, or different network usage profiles) outweigh the costs (including the risk of cannibalisation). This is true for any MNO negotiating an MVNO arrangement. The only thing making Magticom's negotiations unusual is the regulatory overhang of a prospective mandated MVNO remedy.

Significant economies of scale and scope	GNCC suggests that Magticom's size confers benefits that others cannot match.	The economics of building a mobile network are such that most markets can support at least three network operators. Georgia is no different. Magticom has grown to be the largest operator through operational excellence, and should be allowed to earn a reasonable return on the (risky) investments it made in the past.
Profitability and ease of access to funding	GNCC observes relatively high EBITDA margins for Magticom (and Silknet and Cellfie).	There are specific characteristics of the Georgian mobile market that should be taken into account (i.e. lack of handset sales), A closer look at profitability than just reported EBITDA margins reveals that returns on investment are in line with a properly calibrated view of expected returns, reflecting the risks faced at the time of investment. The regulator needs to assess risks faced at the point investment funds are (or were) committed. Any regulatory interventions must follow the same principle.
GNCC proposes a national roaming and co-location remedy.	GNCC says that there is a problem of over-investment in the mobile market, which raises rivals costs. It proposes to address this through national roaming and co-location.	We are perplexed at the idea that over-investment is a problem in this market. We had understood that GNCC was keen for MNOs to invest in 5G networks, and yet the 'competition problem' that national roaming and co-location is addressing is over-investment, which does not appear to be internally consistent. GNCC seems to be suggesting that Magticom has over-invested in a way that raises rivals' costs, but the option to make (risky) investments has always been open to all operators, and Magticom should not be penalised for investing effectively and efficiently and executing its business strategy well. This kind of 'winner's curse' leads to bad regulation and poor outcomes for consumers. National roaming and co-location remedies are not appropriate here for the reasons set out above, but also because spectrum licence coverage obligations means that national roaming shouldn't be required, other than perhaps in the most remote rural areas.

Conclusion

We believe that ComCom has misinterpreted important aspects of the Georgian mobile market, which renders the findings of SMP for Magticom inappropriate. We disagree with GNCC's conclusions, and find that there are a number of errors it has made:

- The market is highly competitive and well-functioning. Network quality is high, and prices are on average below EU benchmarks.

- GNCC seems to base its findings on high EBITDA margins but misinterprets what these represent. Margins are high for Magticom because it does not provide or subsidise handsets, and because it has made strategic investments in the past, which other operators have not. That does not mean that it has 'over-invested', simply that it has been efficient and successful in the investments it has chosen. It should be allowed to make a return on those investments, and our ROCE analysis shows that Magticom's returns are not out of line with benchmark returns for Georgia over the last 15 years.

- The remedies suggested would be disproportionate even if a finding of SMP was supported, which it is not.

GNCC must amend its findings, remove the proposed remedies and allow the market to continue to function effectively, with incentives to invest in 5G intact, and the prospect of continued competition in coming years.

1. Introduction

In GNCC's mobile market review consultation, Magticom was deemed to have SMP, and the following regulatory remedies were suggested: mandated wholesale MVNO access, national roaming, and co-location.

GNCC states that the finding of SMP is based primarily on a market share of over 40%, as well as analysis of the following secondary criteria:

- Barriers to market entry and expansion;
- Magticom's absolute and relative size;
- Magticom's control over infrastructure not easily duplicated by its competitors;
- Absence of countervailing buying power from access-seekers and Magticom's lack of incentive to conclude long-term and sustainable wholesale agreements;
- Magticom's significant economies of scale and scope gained through its national infrastructure for both fixed and mobile services, its national distribution channels and vertical integration; and
- Magticom's overall profitability and consequent ease of access to investment funding.

A number of these criteria have been reviewed in detail by other respondents, and some are reviewed in this report.

To date there have been a number of responses to GNCC's consultation. We would highlight Frontier Economics' report on behalf of Silknet, in which Frontier disagrees with GNCC's conclusions that the retail market does not exhibit effective competition, that the wholesale mobile access market passes the three criteria test, and that ex-ante regulation should be imposed on the alleged SMP operator. We would concur with Frontier's analysis that "*the Georgian retail mobile market is characterised by vibrant price competition with no operator having the ability to increase their prices unilaterally with a view to distort competition*".

We do not propose to revisit the conclusions of that report, but note the view offered that GNCC has interpreted incorrectly a number of aspects of market competition, in particular:

- GNCC has incorrectly captured competitive dynamics in the market. Frontier correctly points out that 95% of customers on pre-paid services, combined with extensive multi-SIM and e-SIM usage, are suggestive of highly competitive market.
- That GNCC's statement that the high proportion of pre-paid users using multiple or e-SIMs tends to incentivise only short-term investment is not justified. We would go further and state that we believe this statement is wrong and fails to understand the true nature of competition in the Georgian mobile market, which is based on network quality and innovative pricing offers.

Frontier also note that a number of price benchmarking studies show that retail mobile prices in Georgia are, in most cases, significantly below European averages.

2. Mobile market economics

There are different ways to build a mobile network and the associated functions

At the most basic level, when launching a mobile phone service for consumers, mobile network operators have strategic choices about how they deliver service, how much they outsource certain network elements, and whether they buy all the required assets upfront.

One of the reasons why mobile services tend not to be price-regulated is that it is possible to start a mobile network with relatively low capital costs, and to 'match' a large proportion of costs with revenues, through renting or outsourcing elements of the business, including network assets, customer service, network management, all of which are choices made upfront by the MNO. This way of setting up a mobile network may be considered relatively low risk, in that the upfront investment is low.

Magticom has made risky strategic decisions, and has executed them well

The strategic choice made by Magticom has been to consistently buy (rather than lease) all its assets, develop its own systems (billing, network management, etc), provide its own call centre, run and provision its own network, and rely mostly on word-of-mouth to market the service.

Different approaches to network operation are part of a vibrant competitive market

The fact that Magticom has chosen to invest upfront should not be taken as evidence of a lack of competition. Magticom made strategic decisions, created an excellent network with happy customers, and should be recognised as having executed its plans well. But it has not done anything that its competitors could not match, had they had the foresight to follow a similar path or manage their networks equally well.

We are perplexed by GNCC's comments in relation to 'over-investment', leading to raised costs for Magticom's rivals. This appears to suggest that, when Magticom decided to undertake its risky investment strategy, it should actually have followed the same path as other operators, rather than run the risk of outperforming them, thereby creating a potential future competition problem. The idea that a successful business strategy should be discouraged or penalised seems a very odd way to regulate, and will lead to perverse and unwanted investment incentives for Georgia.

Magticom's observed margins reflect the strategic investment decisions made

GNCC notes that EBITDA margins in the Georgian market as a whole are higher than other EU markets.

However, Magticom has depreciated much of its upfront investments, which were risky at the time, and as a result it reports higher margins than other operators, but that does not mean it is making higher profits. It is simply seeing a reward for its risky investments.

We would be concerned if there was to be a 'winner's curse', where the best-performing network operator was penalised for making good decisions and operating efficiently. Such an outcome would have a devastating effect on investment and efficiency incentives.

Magticom's capex as a % of revenue has been relatively high

Magticom has spent on average 20% of revenues on capex since 2003, with specific waves of investment for 3G – peaking in the period 2006 (when capex was 36% of revenues) to 2009 – and 4G – peaking in the period 2015 (when capex was 49% of revenues) to 2017. Magticom is about to start the next investment cycle for 5G, where we expect to see similar peaks of network capex. For comparison, we see capex/revenue levels of around 10% across EU markets over the same time period, excluding new entrants which necessarily have far higher capex/revenue ratios in the first few years of operation, when their revenues are very low.

3. Mobile pricing in Georgia is highly competitive

The vast majority of Magticom's subscribers are on prepaid tariffs, and have multiple SIMs, using Magticom's network alongside its competitors. Magticom's subscribers choose Magticom not only because it provides the best, most reliable network, but also because of the innovative price plans that allows them to 'mix and match' different service elements at different service levels and different prices.

Updated price benchmarking study

We note that GNCC's original price benchmarking study has been updated to correct for purchasing power parity considerations, firstly by GNCC itself and then by Silknet and its advisers. In the time available for this report, we have not extensively reviewed the methodologies of these studies, but for the purpose of our initial conclusions, we assume that GNCC's updated study is the most appropriate source of data. For the avoidance of doubt, we do not take a view on the updated pricing analysis undertaken by Silknet but recognise that they offer an alternative view of pricing benchmarks.

GNCC has concluded that there is a lack of price competition in Georgia's retail mobile market, which is likely to give rise to consumer harm. Price comparisons are inherently complex, not least given the range of packages available and differing consumer preferences for voice and data combinations. It is therefore important to take a holistic view of pricing evidence available, rather than a snapshot view of specific basket(s) which does not reflect what consumers actually purchase. However, the evidence underpinning GNCC's conclusion appears to be rather limited.

Most prices are in line with or below EU averages

Overall, prices in Georgia are actually in line with EU data. We believe GNCC has misstated the outcomes of the study. It stated in the consultation that its 2023 price benchmarking study found Georgia to be one of the most expensive countries for mobile, but the full study reveals a much more mixed picture at best, with only four out of the 12 voice and data baskets assessed more than 20% above the European average, while five out of 12 are more than 20% below.

Pricing for low usage mobile voice and data baskets are far cheaper than the EU average, and even though the higher usage baskets are generally more expensive than the average, they are certainly not an outlier. In addition, the availability of data add-on packages – which are consistently priced well below the EU average – provide a competitive alternative to higher use voice and data baskets for those with higher data needs. Such data-only packages tend to not to be available across most EU countries, but for those where they are, prices in Georgia are the second lowest of the six countries for which such packages are available.

Competitive effects seen in provision of low-price data-only add-ons

This evidence shows that MNOs have responded to consumer demand for data to provide stand-alone data-only add-ons. This provides evidence of not only the innovative nature of the market, responding to customer demand with new products, but also the nature of competition in Georgian mobile, where provision of subsidised mobile handsets does not form part of the competitive environment.

Prices for business users are very low indeed

While consumer mobile prices in Georgia are broadly in line with or below EU averages in general, prices for business users in Georgia are unequivocally lower than in the EU, with 18 out of 19 packages seeing prices below EU average by around 50% on average. Businesses in Georgia are getting exceptional value for money on their mobile phone tariffs, including for very high data users, where the prices of 20 GB and 50 GB data packages are also nearly 50% lower than EU averages.

Conclusion

The above evidence is suggestive of a highly competitive mobile market, where prices are kept low by consumers (and businesses) having a choice of networks, and operators using special deals through a multi-SIM approach to deliver value for money.

4. Magticom's reported profits reflect a successful strategy

In the market review consultation, GNCC states that "*Georgian mobile operators are earning higher cash margins [e.g. EBITDA] than the prevailing world average, especially Magticom, where the EBITDA margin is more than double the world rate*".

The fact that Georgian mobile operators have higher observed EBITDA margins does not reflect a lack of competition. Instead, this reflects a different competitive landscape in Georgia – where MNOs don't sell or subsidise handsets – and for Magticom specifically, the strategic choices made by Magticom in order to compete.

Georgian MNOs don't sell or subsidise handsets

The biggest reason why Georgian mobile operators exhibit higher EBITDA margins than other countries is simply that mobile network operators in Georgia are in the business of selling mobile network access, and don't operate as mobile phone resellers for handset makers. This is in contrast to MNOs in other countries, which often do sell mobile phones as part of mobile plans. As a result, Georgian MNOs' reported revenues are lower than if they sold handsets, and their operating margins are not reduced by handset subsidies. This can be seen from the table below, which compares reported EBITDA margins for Cosmote in Greece, and Silknet and Magticom.

Since operators in Georgia don't compete on the basis of who retails the cheapest handsets, the focus is much more on price and non-price competition in network service (e.g. network quality, customer service, innovative tariff structures). The strategic choices that Magticom has made have led it to invest heavily in order to offer the best service quality, through bespoke billing software, in-house customer relations teams, in-house network management, and operations equipment. In addition, all its assets are owned, rather than rented. This has further implications for Magticom's observed profitability.

Magticom's 'integrated' business model leads to opex savings

Magticom has what might be termed an integrated business model, meaning that it has invested upfront in technologies, assets and equipment that allows it to run almost all parts of its business independently.

The result of that upfront investment is that ongoing operating costs are kept low, while network quality and customer service is maintained at a high level. This can be seen from the comparator data below, which shows that Magticom's operating costs on rental and maintenance costs are a fraction of those for an operator like Cosmote, and are a far smaller proportion of total revenue than for Silknet.

Table 2: EBITDA comparison: Cosmote vs Silknet vs Magticom

	Cosmote (Greece), EURm		Silknet, GEL, m		Magticom, GEL, m	
	2022	2023	2022	2023	2022	2023
Mobile revenue (incl handsets)	1200	1237				
EBITDA margin (reported)	43.4%	43.3%				
Mobile EBITDA (assumed)	521	536				
Mobile service revenue (excl handsets)	986	1009	276	318	397	444
EBITDA margin (excl handset revenues)	53%	53%				
Merchandise/ commission costs (assume 90% mobile)	311	331				
Loss on handset sales	-97	-103				
Mobile EBITDA (excl handset sales and losses)	618	639	177	211	301	342
Mobile EBITDA margin (excl handset sales & losses)	**63%**	**63%**	**64%**	**66%**	**75%**	**76%**
Software maintenance costs			12	12	0	0
Network management/maintenance	26	28	18	18	16	18
Interconnect and roaming costs	155	159	17	17	20	19
Infrastructure rentals, IRU and leases			7	7	0	0
Total rentals and maintenance costs			**54**	**54**	**36**	**37**
Mobile share of rentals & maintenance costs	**351**	**369**	38	38	25	26
EBITDA excl rentals & maintenance costs	970	1008	215	249	326	368
Margin	**81%**	**81%**	**78%**	**78%**	**82%**	**83%**

Source: Company reports, Flint analysis

In the table above, we first show the EBITDA margin being reported by Cosmote (43.3% in 2023), and the mobile revenue that is associated with it. Since that revenue includes significant handset sales, removing those handset sales gives an EBITDA margin based purely on service revenues (53%). We then isolate the level of subsidy on mobile handset sales, by removing merchandise and commission costs. These figures are reported across Cosmote's fixed and mobile business – we have assumed 90% of these costs are associated with mobile handsets. Removing these costs suggests a mobile EBITDA margin for Cosmote (excluding handset sales and losses) of 63%. This is comparable to the 66% reported by Silknet in 2023, and the 76% reported by Magticom.

We then attempt to identify the impact of Magticom's integrated approach, which results in lower rentals and maintenance costs. The figures shown above for Silknet and Magticom allocate 70% of total reported rentals and maintenance costs to the mobile business, based on Group revenue splits. For Cosmote, the mobile share of rentals and maintenance costs requires a degree of allocation of shared costs, which we allocate on the basis of mobile revenues as a proportion of group revenues.

The resultant EBITDA excludes handset sales, rentals and maintenance costs, and is comparable across the three operators. The Cosmote and Magticom mobile margins are remarkably similar, in the low 80%s, as you might expect for a market-leading mobile business, while Silknet is slightly lower, at just under 80%.

One of the conclusions from this data is that Magticom's EBITDA margins are at a level that would be expected from a company that has invested upfront, made good strategic decisions, and runs an efficient and well-run network. It is therefore misleading to compare Magticom's EBITDA margins to that of other operators that might have adopted a different business model.

Average returns over the last 15 years have been c20% pre-tax, c15% post-tax

Based on our analysis below, Magticom has earned a return on capital employed (ROCE) of around 20% pre-tax or around 15% post-tax over the last 15 years, which we consider to be a reasonable timeframe to consider investment returns for a mobile network operator.

Estimating returns on capital is not a straightforward exercise for a mobile network business such as Magticom's. Our starting point is to work out a return on operating assets, which can then be compared to the relevant cost of capital related to buying or creating those assets. For this purpose we have adopted a return on capital employed (ROCE) approach, comparing operating profit with operating assets in every given year over the relevant period.

There are some complexities that we need to consider in our analysis:

- For an integrated telecoms business, there are a number of assets that are used for different services, e.g. a core network will be used to deliver both fixed and mobile services, or certain elements of network backhaul may be used by both fixed and mobile services. It is possible to derive a mobile-only ROCE by splitting out assets and profits, or we can estimate the Magticom group ROCE. Given that Magticom was a pure mobile operator until 2016, and that the mobile business continues to form the majority of the business, we have chosen to adopt an approach where we consider consolidated assets and consolidated profits across the Magticom business.

- Mobile operators tend to accelerate depreciation of assets, leading to the total level of reported assets being low. The means that the reported (historic cost accounting, or HCA) asset base may not be reflective of the true cost or value of the assets. In order to obtain a better estimate of the value of Magticom's operating assets, we assume a current cost accounting (CCA) valuation in 2023 based on Magticom's estimated replacement cost valuation for its network assets.

- Magticom estimates the total replacement cost of its *combined* network (i.e. including the fixed line business) to be $0.77bn at the end of 2023 (excluding goodwill). This takes into account the gross book value of assets in use, the value of in-house developed assets (such as billing software), and revaluation surpluses on land and buildings and mobile towers.

- Using Magticom's estimated replacement value of $0.77bn in 2023, we then deduce annual values of the asset base by deflating the 2023 value using CPI inflation going back to 2009. We also have to adjust downwards the value of the asset base in 2015, when Magticom purchased Deltacomm and Caucusus Online, otherwise the asset base in the earlier years will reflect a larger business than the associated profits.

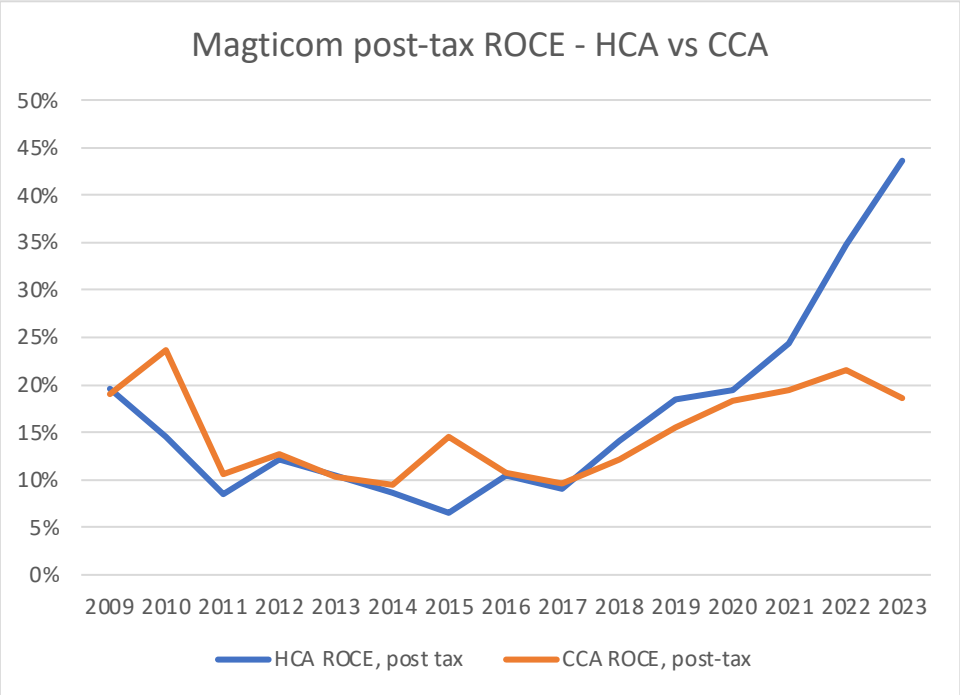
- As a cross-check of the resultant valuation, we compare the value of the deflated CCA asset base in 2009 with the reported HCA asset base. We find that the deflated CCA value in 2009 is just 3% more than the reported HCA asset base, which is reasonable given that the business started in 1996 and has followed an accelerated depreciation path since inception (i.e. we would expect the replacement cost of the network in 2009 to be a little higher than the total assets reported in the balance sheet).

- In order to compare like-with-like, when estimating the ROCE for Magticom on a CCA basis, we adjust upwards the reported EBIT figures to take account of 'holding gains' in the form of lower

annual depreciation, i.e. the EBIT in a CCA model is estimated by taking the reported EBITDA, adding the increase in asset value and taking away the annual capex cost.

- The resultant ROCE for both HCA and CCA approaches is shown below. The average ROCE over the period in question is around 15% post-tax (the HCA approach gives an average of 17%, while the CCA approach averages 15%).
- To cross check the asset value, we can consider the sensitivity of the 2023 valuation. If the assumed asset value at 2023 was $0.6bn (rather than $0.77bn), then the average CCA ROCE across the period would be 18%, and if the asset value was $1bn in 2023, the CCA ROCE would be 13%.
- The chart below shows how the HCA ROCE diverges from the CCA ROCE in the latter years of the analysis, as the impact of accelerated depreciation is cumulative, and results in a lower relative asset size by the end of the period.

Figure 1: Magticom post-tax ROCE - HCA vs CCA



Source: Company data, Flint analysis

The next question is whether relatively high EBITDA margins represent a fair return on investment, or a 'fair bet', when considered against the relevant benchmark cost of capital at the time these strategic decisions were made. To assess this, we must compare the level of return with the appropriate level of returns required by investors. In the next section, we explain the concept of the 'fair bet' in more detail and compare Magticom's returns to the returns required by investors to invest.

5. Financial returns need to reflect the risks faced

In previous sections we set out the potential weaknesses of looking only at a short history of headline reported accounting returns, and the risks of using a poor choice of metric for comparison. In this section we focus on the actual economic returns earned by investors in Magticom and consider how evidence on this might be interpreted.

First, we set out the idea of the 'fair bet' – an important concept in regulation. We then consider the benchmark evidence that helps identify what reasonable range of returns might be witnessed under a 'fair bet' arrangement in Georgia. Finally, we consider how Magticom's actual returns compare to this.

The 'fair bet'

Regulated companies undertake investments that have potential upside and potential downside. If costs are higher than expected or returns are lower than expected, investors in the regulated company will earn lower returns from their investment, and vice versa. The key is that expected returns should be equal to or greater than expected costs – otherwise the company will not invest.

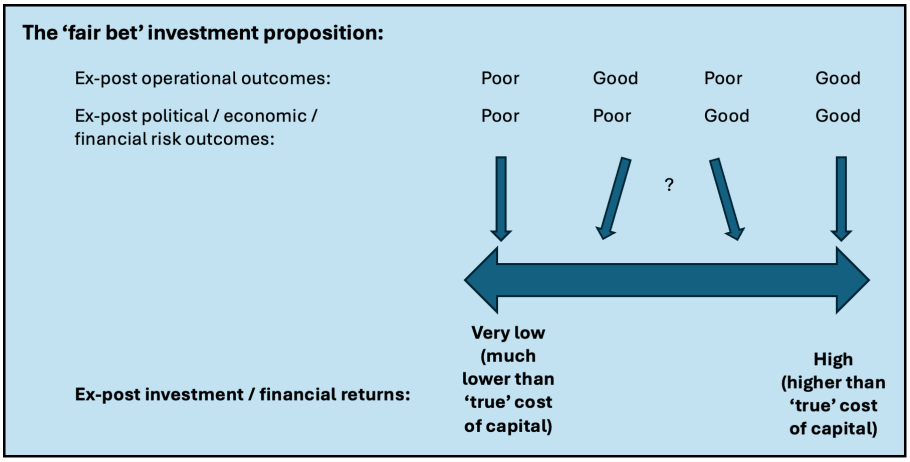
A 'fair bet' involves the design of a regulatory contract or framework in a way that ensures that – on average, and if performing as a typically efficient market operator – the regulated company will expect, on average, to earn its cost of capital. A 'fair bet' regulatory framework is needed to give investors confidence that the legitimate opportunity for upside (commensurate with the downside risk at the time of the investment) will not be regulated away in later years.

In other words, if a company takes on the risk that things turn out less well than expected, it should also be given the ability to benefit from the upside (which will not be 'clawed back' if it occurs). If a 'fair bet' is not seen to hold, then investors will expect – on average – to earn less than the cost of capital; under such circumstances, rational investors would simply not invest.

In practice, this means that the regulator needs to form a view of risks faced at the point investment funds are (or were) committed and ensure that subsequent performance is judged against a properly calibrated view of expected returns which reflects those risks. Any regulatory interventions must follow the same principle.

- If outturn operational performance is good, and prospective downside risks have not materialised, then observed returns will exceed the cost of capital – but regulatory intervention to reduce economic returns under such circumstances would undermine the fair bet. Investors would have borne the downside risk but been denied the opportunity to earn the upside.

- If the regulator did intervene in such circumstances (ex-post) in a way that limits returns, then the signal sent to prospective future investors is that the fair bet cannot be relied upon. In the event that investors do well (i.e. things turn out better than expected), the upside benefits would be at risk of expropriation (or be regulated away), while if investors don't do well (i.e. things turn out worse than expected), they would be forced to bear the losses. Under this situation, prospective investors would simply not invest.



What this means in practice, is that benchmark returns need to be calibrated to reflect the actual experience of investors. If investors have not experienced the crystallisation of significant downside risks that were beyond their control, then they will have earned returns in line with those needed to created conditions of a 'fair bet' at the time investments were made. These benchmark returns – in Georgia – will significantly exceed the true cost of capital [but do not mean that investors are earning inappropriately high level of profits].

Additionally, any regulatory interventions that might ultimately be judged necessary must also be anchored to same benchmark rates of return that continue to support the original 'fair bet' principle. This is necessary to give prospective investors the regulatory certainty needed to invest – which is particularly important as MNOs in Georgia turn to investing in their 5G networks.

Benchmarking in benign economies

In a benign economy – typical across Western Europe – the risks faced are mainly operational. Financial outcomes for investors will depend mainly on the choices and performance of the regulated business and its management. It is unlikely that investors will suffer extreme losses unless the company exhibits severe operational underperformance.

This is because – in such settings – politics, economies and financial markets are more stable, and the likelihood of extreme economic and financial downsides is limited. Here, benchmarking returns against the 'true' cost of capital can make sense, recognising that the effects of these ('exogenous') factors, that are beyond management control, are likely to be smaller. Put another way, an outcome on the right-hand side of the above chart will be most likely, with minor but broadly symmetrical variation in returns around a 'central case' cost of capital, linked to operational choices and efficiency.

Benchmarking in Georgia

Georgia's risk profile for investors is very different to Western Europe. In a frontier economy like Georgia, there are additional and very significant risks linked to the economy, politics and financial markets.

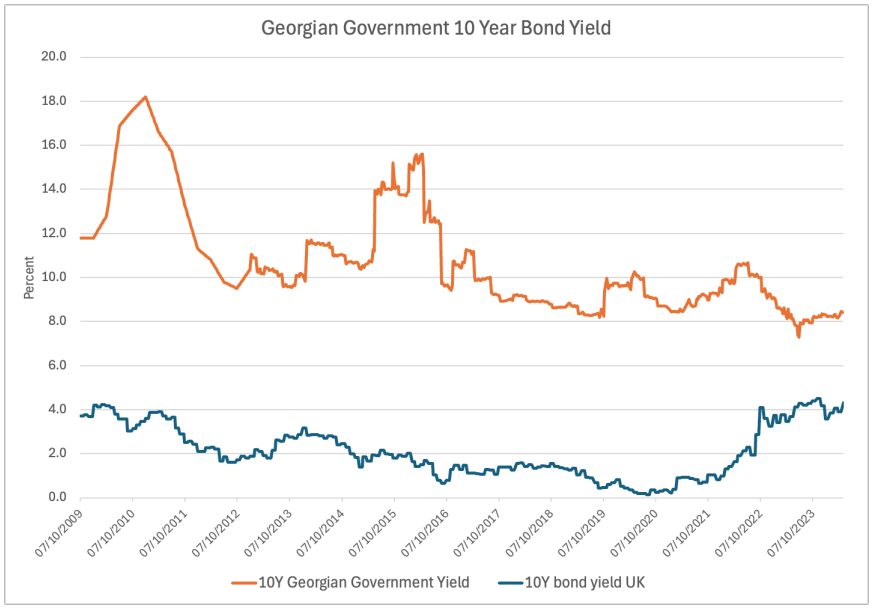
These risks greatly extend the range of possible outcomes for investors, and are almost entirely asymmetric – biased to the downside. Good operational outcomes might be marginally improved by good political, economic and financial outcomes. However, the manifestation of adverse political, economic and financial risks can – and is more likely – to have a catastrophic effect on investor returns.

It is difficult to quantify these risks and their asymmetry with precision, but some capital market evidence can be informative – notably **government bond** and **corporate borrowing yields**, as well as some indication of the returns that international investors require in order to hold Georgian investments (proxied by expected returns on listed Georgian banks, TBC and Bank of Georgia).

1. Benchmark returns in Georgia: Government bond yields

The unusual risks faced in Georgia are partly reflected in a significant premium between the observed Georgian government bond yield and the yield typically observed in a more stable economy – for example – the UK, or Germany. To illustrate, a comparison between Georgian and UK 10-year bond yields from 2009 is shown below. NB. The conclusions are materially unchanged depending on whether we use a UK or a stable EU government bond yield.

Figure 2: 10 year bond yields - Georgia vs UK



Source: Georgian Ministry of Finance, Refinitiv / Bank of England, Flint analysis. 2Y/5Y/10Y spreads for 2013-2015 used to synthesise 10Y Georgian yields prior to 2012.

We would make three main observations:

- First, the scale of difference in perceived risk is enormous, reflecting significantly greater potential investor losses in Georgia (e.g. reflecting the risks of, and investor losses on, default, or extremely high inflation). On average, Georgian government debt has yielded a premium of 9% to UK government debt. At times, the premium has been as high as 14%. By comparison with other nations, perceived risk of this type in Georgia is very high.

- Second, these perceived risks have reduced over time. This may reflect expectations of greater future stability, which may be linked to Georgia's EU accession status. However, this recent outlook does not change the risks that were faced by investors in Magticom at the time infrastructure investments were made in the past.

- Third, this premium on government debt reflects the likely losses associated with only a subset of frontier economy risks. This government yield premium will link mainly to the likelihood of government default and currency volatility.

We should also clarify an important link between this evidence and the 'fair bet' principle. The reported yield on government debt is an economic return (equivalent to an internal rate of return, or IRR) calculated based on an assumption that cash interest and principal repayments are made in full, and on time. It is perhaps better described as a '**promised' yield.**

Government yields therefore reflect an outcome that will only be experienced by bondholders if the downside risks described *do not materialise*. If the risks do materialise, the economic return to Georgian government bondholders may be much lower, and potentially involve losing a significant proportion of their original capital.

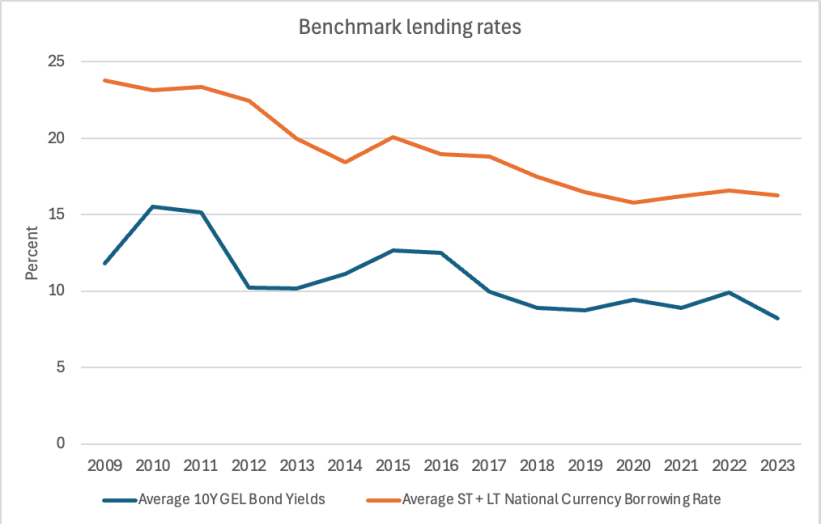
Referring this back to our earlier 'fair bet' illustration; in Georgia, outcomes on the left-hand side of the chart were considered likely in the past and remain so, with significant probability that investors in government bonds may face large losses resulting from extreme risks that are beyond their (investors') control. Offsetting this was/is the likelihood that they might earn returns equal to (but no greater than) the quoted Georgian government yields.

Thus, by way of example, investors in 10Y Georgian government bonds in early 2014 will have earned the yield observed at that time, of close to 12%. This does not represent the return they expected to earn, instead it represents the return they *hoped* to earn, if downside risks did not crystallise (which they have not). Investors have earned returns that may appear high relative to returns earned in more benign economies, but this was not the result of an economic arrangement that was systematically biased in their favour.

2. Benchmark returns in Georgia: Loan rates

Looking at commercial borrowing rates offers a further useful pointer to benchmark required returns in Georgia:

Figure 3: Georgian Benchmark lending rates



Commercial lending rates reported by the National Bank of Georgia have on average exceeded government bond yields by approximately 8% over the period since 2009. These commercial borrowing rates include a substantial amount of corporate borrowing, and lending to individual 'entrepreneurs'.[6] By comparison, the typical yield differential between A/BBB corporate bond yields and UK government bonds over the same period has been around 1.5%.

This tells us what lenders needed to be 'promised' in Georgia for them to be willing to provide debt finance. Lenders have required promised debt returns of c.20%, on average, since 2009, versus 3 – 4% over the same period in the UK/Germany. For a capital intensive industry like telecoms, such a difference is highly material.

3. *Benchmark returns in Georgia: Cost of, or expected return on, capital*

Establishing an overall cost of (or *expected* return on) capital is very difficult in Georgia. Traditional Capital Asset Pricing Model (CAPM) principles may hold in theory, but it is extremely difficult to populate a CAPM model with meaningful assumptions in the absence of developed, liquid capital markets. Many evidential challenges prevail in estimating returns required by investors – amongst other things, a major lack of liquidity in Georgian capital markets. A CAPM approach only works well when the available market data is current, plentiful and represents liquid assets. None of these conditions are satisfied in Georgia, and therefore extreme care has to be take with estimates of the cost of capital, such as the PWC report for GNCC.

There have been some attempts to establish precise benchmark returns in frontier economies[7] but this is not an area of extensive academic consensus – mainly because it is not always clear what the resulting estimated cost of capital values tell us. Estimates of cost of capital, in the face of significant risk, cannot be used to benchmark today's or tomorrow's returns and assess excess profits in a way

[6] Source: National Bank of Georgia
[7] A frequently referenced source for such data is Aswath Damodaran, NYU Stern, https://pages.stern.nyu.edu/~adamodar/

that is suitable for regulatory decisions. Similarly important is the 'datestamp' of any cost of capital estimate, when the true cost of capital is likely to have been volatile over time.

This is because, in the absence of a full understanding of risks faced in the past and their likelihood at that time, it is not possible to form a view of whether any surplus relative to today's expected cost of capital, or any previous estimate of the cost of capital – results from a bias in the regulatory arrangements that have prevailed, market power, good management, or the legitimate proceeds from good fortune with respect to exogenous risks.

Given this, it absolutely does not follow that any 'surplus' calculated in such a way should be 'regulated away'. Instead, the regulator should recognise that these returns may be the manifestation of an entirely appropriate and pro-competitive regulatory framework.

Benchmark returns in Georgia: ex-post evaluation vs capital market evidence

A more meaningful basis on which to view observed returns is therefore by comparison with benchmarks that derive more directly from the available capital market evidence, requiring less subjective judgement. This provides a more tractable way to evaluate, ex post, how returns might have been hoped to evolve – under a 'fair bet', with a successful outcome – with how they have evolved in reality. The available evidence lends itself much more helpfully to this approach.

What we can say with confidence is:

- Other things equal, required returns on capital overall should be higher than required returns on debt. Debt is less risky than equity in an equivalent business. Thus, at minimum, we would expect the observed return on investment (IRR) for investors in Magticom to be (comfortably) above the government bond yield plus the premium reflected in lending rates.

- The required premium on investment in Georgian infrastructure would typically be much greater than that observed on corporate debt, reflecting a wider range of elevated risks faced by equity investors and the nature of the assets held. For example, the risks of asset appropriation or other political intervention, constraints on trade, tax, and political unrest would manifest disproportionately for equity investors in infrastructure businesses that own assets which are – by nature – largely immovable.

- It also seems likely that the *expected* market equity risk premium would be bigger in Georgia than in benign economies, because systematic risks in Georgia are likely to be bigger than in other economies. Moreover, if a company has not seen potential downside risks crystallise, this expected equity risk premium would be inflated within today's observed returns to reflect the 'fair bet' framework – in the same way that the cost of government debt is inflated within the 'promised' yield, relative to the true expected yield.

- We observe useful proxies for returns required by investors in Georgian assets, provided by the Georgian banks, TBC and Bank of Georgia, which are both listed on the London Stock Exchange. Based on prices as at 27 June 2024, these stocks trade at a price/earnings ratio of 4.2 and 2.9, versus a UK based-bank such as HSBC or Barclays, which trade at P/E ratios of 7.5 and 8.0. Since TBC and Bank of Georgia between them have approximately 75% of the Georgian banking market, and generate significant cashflows annually, they could be viewed as a proxy for

investment in the Georgian market[8]. These are the most liquid assets to assess the Georgian country risk premia for investors. Note that investments in telecoms stocks in Georgia would necessarily demand an illiquidity premium over and above the returns expected on bank stocks listed in London.

- A P/E ratio for Georgian bank stocks of around half the level for UK bank stocks suggests that investors require at least twice the level of target returns in order to accept the inherent risks of holding Georgian stocks versus their Western European counterparts. Based on these proxies, a 'fair bet' benchmark level of profitability in Georgia would be at least twice the level elsewhere in Europe.

It is not straightforward to quantify these features in a precise cost of capital estimate, however, we attempt to reflect them in a sensible assessment of benchmark returns, as follows:

- For illustration, we show a 'lower bound' benchmark return on capital which reflects the Georgian 10Y government 'promised' yield plus a market premium of 6%. This estimate of market premium is broadly aligned to the long-run observed historic equity market return in developed economies. It is generally used as an estimate of future expected return (as opposed to 'required' return observed in good states under the 'fair bet').

- As can be seen, this produces numbers that are often lower than the observed debt lending rate – and are therefore implausibly low. Nonetheless we show this, as a simple illustrative lower bound – while recognising the potential inconsistency of combining an expected market return with a 'promised' government yield.

- The upper bound of our benchmark return reflects the proportionate relationship between Georgian 'promised' government yields (typically 10% over the recent period) and the typical nominal yields of c.4% historically observed in Europe, the US and UK. It applies the same ratio of the 6% observed equity market premium in those countries, which translates into a 15% market 'promised' premium in Georgia, and again adds to the underlying Georgian 'promised' bond yield.

- Effectively our upper bound is intended to estimate a plausible estimate of the overall 'promised' return on capital that would accrue to investors if more extreme downside risks were avoided. It reflects the range of prospective 'high' returns to investors that would plausibly have been needed to offset the significant downsides which may not have crystallised, but would have led to large, negative returns for all investors had they done so. It assumes that the risk/return relationship would be similarly proportionate for equity capital investors, relative to government bond investors, as in developed economies.

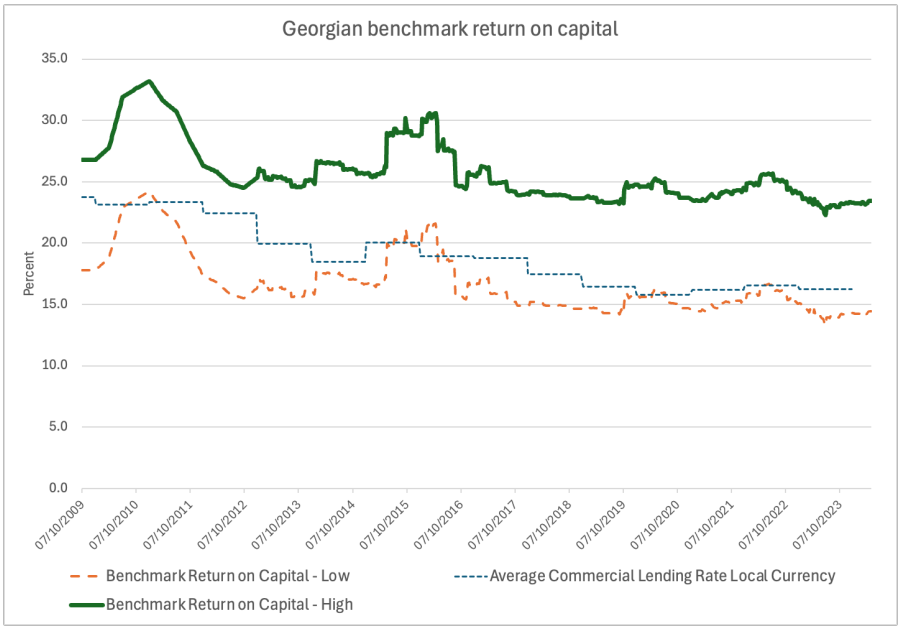
- Our analysis of P/E ratios for Georgian banks vs western banks is suggestive of a level of premium consistent with the upper bound of our benchmark return. If we assume similar predicted growth rates for Georgian and western banks of low single digits (ceteris paribus), then a Georgian bank

[8] We recognise that banking and telecoms are very different industries, with very different levels and types of asset intensity. We do not suggest they are similar, but we do suggest that the higher level of prospective returns demanded by investors on relatively 'safe' Georgian banking stocks versus UK banking stocks provide a useful reference point for the sorts of returns that investors would require from Georgian telecoms stocks versus EU or UK ones.

P/E of 3 – 4 versus a western bank P/E of 7.5 – 8 implies a discount rate of around 30% for Georgia, and around 15% for western banks. These figures are approximate, and not intended to be determinative, but the relative level of return required by investors in the Georgian market is clearly a significant multiple of that required in the UK or other western economies.

- We believe that our upper bound is a more credible benchmark to be used as a basis for interpreting observed returns at Magticom at the present time, because our lower bound seems likely to under-call the equity market risk premium. However, we show our full range for comparison purposes below, in reflection of the uncertainties of such an exercise.

Figure 4: Georgian benchmark return on capital



- This set of benchmarks can therefore be used as plausible references against which observed accounting and economic returns might be compared.

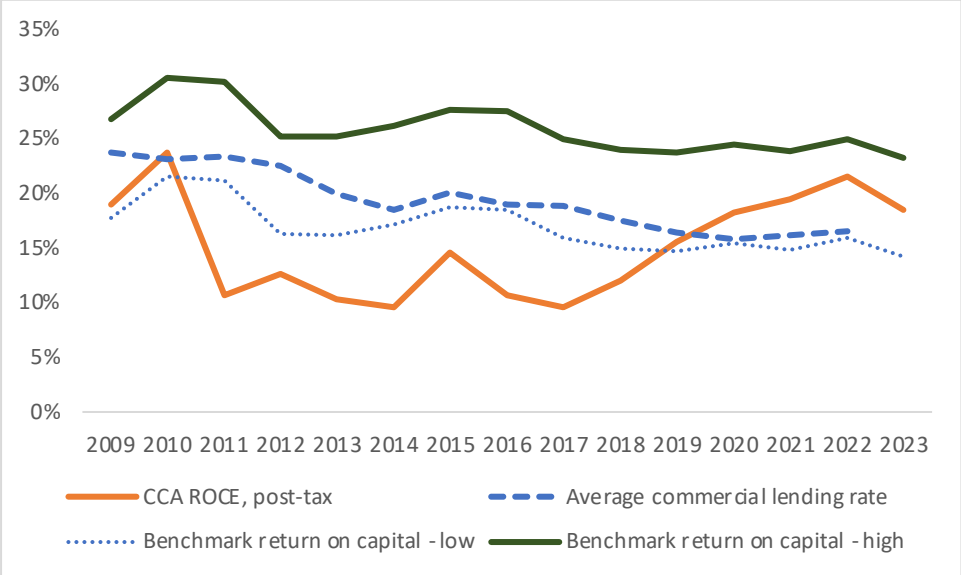
Evaluating Magticom's actual returns

We now compare Magticom's observed returns with these benchmarks. To do this we show the estimated CCA post-tax ROCE (explained in the previous section) with the return on capital benchmarks set out above.

The chart below shows the estimated CCA ROCE compared to the reported debt lending rate, and our benchmark return on capital range. This shows that annual returns were below the estimated cost of debt until 2019, and only in recent years have they moved above that level.

Comparison of observed returns with our benchmark return on capital range shows a considerable shortfall up to 2018, before ROCE just edges above the low end of the range. Magticom's post-tax ROCE remains below the upper end of the range throughout the relevant period.

Figure 5: Magticom ROCE (CCA) vs Benchmark returns on capital



Source: Company data, Ministry of Finance Georgia (MOFGE) data

The average annual deficit in ROCE versus the high benchmark return on capital is 11%. Over the 15-year period this would equate to c$0.6bn in returns below the benchmark.

When considering the returns earned by investors in the Georgian telecoms market in recent years, it is instructive to consider the cases of Veon and TeliaSonera. These international telecoms groups both owned mobile businesses in Georgia, but sold their assets (now Cellfie and Silknet, previously Beeline and Geocell) at significant losses in 2022 and 2018 respectively. These international investors did not consider that they were able to make sufficient returns to compensate them for the associated risks, despite the relatively high EBITDA margins observed by GNCC. This does not suggest a market where operators are making returns above the perceived cost of capital.

Conclusions on observed returns

The comparison with benchmark return on capital is notable. Effectively, investors who have supported and invested in Magticom's business for the last fifteen years have experienced substantially lower returns than they would reasonably have expected – given the circumstances that have evolved – under a 'fair bet' arrangement. The accumulated value of the shortfall is significant.

Consideration of future interventions, and inferences made in assessing market power, must give due weight to this evidence. Investors have failed to recover fair returns. Today's profitability statistics, rather than pointing to excess returns, have some way to go, for several years, to address the historic shortfall.

GNCC must support future investment by accepting the 'fair bet' framework and acting on this.