

Russia Technology: Internet

Local dominance strengthens; competition among ecosystems intensifies

It's been a year since we published **Russia's internet champions positioned to keep US giants at bay**. We revisit our thesis, highlighting that the domestic internet incumbents are successfully defending their home turf from international competition. We have seen only modest incremental efforts from global players, with some recognizing the importance of local expertise (Alibaba's agreement to transfer control in AliExpress Russia to local partners) or conceding to domestic market leaders (Uber merged its Russian operations with Yandex.Taxi, citing Yandex's strong technology and brand advantage).

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The two domestic market leaders, Yandex and Mail.ru, have solidified their dominant positions in search and social networks, respectively, and are leveraging these core businesses to exploit new sources of growth across their ecosystems (e.g. advertising, taxi, food tech, music). While their ever-expanding competitive overlap is worrying, we note this is not unique for global tech and is still relatively limited in scale. We expect the local dominance trend to continue and see significant untapped opportunities in e-commerce, messengers, local services, cloud and fintech.

We re-iterate our Buy ratings on Yandex (on CEEMEA FL) and Mail.ru, and view them as the key beneficiaries of internet sector growth in Russia. We believe the market underestimates the potential upside from online advertising (particularly mobile) and, for Yandex specifically, its online taxi business.

Report highlights

- *Detailed ecosystem map of Russia's internet sub-segments and key players*
- *Our analysis of Yandex.Taxi's path to profitability and scenario of how take rates could increase with no change in drivers' economics*
- *Why we see online advertising sustaining double digit growth*
- *Key trends to watch in 2019 and beyond*

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PM Summary

In our 2017 report we noted that the Russian internet market is rare: It is one of just a handful of large markets globally where domestic firms hold significant market share. We argued that they can defend their positions as the domestic market grows, generating alpha for investors along the way.

It's been a year since we published **Russia's internet champions positioned to keep US giants at bay** (October 18, 2017). We revisit our thesis, highlighting that the domestic internet incumbents are successfully defending their home turf from the major US and Chinese competition. We have seen only modest incremental efforts from global players, with some recognizing the importance of local know-how (Alibaba agreeing to transfer control in AliExpress Russia to local partners, including Mail.ru) or conceding to domestic market leaders (Uber merged its Russian operations with Yandex.Taxi, citing Yandex's strong technology and brand advantage).

We review progress on the various ecosystem enablers that should drive further growth of internet use in Russia and support the positioning of the domestic champions: the large internet population; a high quality and affordable telecom infrastructure; limited focus from international majors on the Russian market; access to an abundant and cheap IT skillset; language/alphabet peculiarities; government support; and competition with global players forcing local companies to innovate.

Our five key mid- to long-term themes for the Russian internet are on track, with the pace of many ahead of our expectations. As a recap, they are: 1) growth looks set to continue, with a further shift to online across all sub-segments; 2) the creation of new platforms and niches, offering existing internet companies potential consolidation opportunities; 3) further market consolidation among existing players, driven by synergy effects; 4) potential for increasingly supportive regulation, helping the internet sector to increase usage/penetration to improve economy efficiency; and 5) more competition between YNDX and MAIL.

Online market growth is showing strong momentum, with most internet sub-segments posting revenue growth exceeding our forecasts YTD (online advertising, taxi and classifieds). While e-commerce growth has disappointed, we consider this market at an inflection point, poised to reap the benefits of the major infrastructure investment commitments made over the past 18 months. Government regulatory support is evident in recent legislation related to self-driving and car sharing, and we see a further potential tailwind in Cloud and e-commerce. Lastly, the rapid expansion of Yandex and Mail.ru's ecosystems continues, with the two adding new platforms and niches ranging from car sharing, cloud, foodtech solutions and paid music services to hardware assistants. While their competitive overlap is worrying, we note this is not unique for global tech and is still relatively limited in scale.

We address three key investor concerns about Russian Internet fundamentals:

1. **Online advertising: Will double digit growth sustain for the medium term?** We believe yes, unless Russia faces significant macro shocks. The Russian advertising market still looks under-penetrated compared to global levels, at 0.5% share of 2017 GDP vs 0.6% for the global average. Consumer engagement is moving to digital from traditional sources of advertising (like TV) – we expect advertising budgets to follow the trend. Mobile usage and content consumption keep growing, and we see

potential upside from higher mobile monetization in search and social networks for Yandex and Mail.ru, respectively. We believe Yandex can increase market share in desktop and especially mobile. While Instagram has moved into the number two position in social networks, we believe Mail.ru's VK can maintain its large lead over the American giant.

2. **Taxi: Could online taxi be profitable and margins reach 40-50% levels?** We believe yes (online taxi's sustained profitability is the major push back to our constructive Yandex investment thesis). The Russian online taxi market is already profitable for Yandex (as of 3Q18), and we detail how margins could reach similar levels as its core search business given scale effects. We also see room for Yandex.Taxi to increase take rates and keep drivers' earnings unchanged.
3. **E-commerce: Who could be the long-term winners and how much could it cost to get there?** We believe there won't be a straightforward answer to this question for the next several years as many public and private players have just started to accelerate their efforts. We also think that some investors may underestimate the magnitude of investment required to become dominant players.

We highlight our expectations for the key trends in 2019 and beyond: 1) Access to capital will increasingly matter; 2) More government regulation and broader involvement; 3) Yandex and Mail.ru will focus on cross-selling / subscription models; 4) Accelerating growth of domestic e-commerce, deceleration of cross-border trade; 5) Offline players will increase focus on online; 6) The internet sector itself will drive advertising budget growth; and 7) Fight for talent will intensify, putting pressure on employee cost inflation and is a possible risk to growth.

We view Buy-rated **Yandex** and **Mail.ru**, which together control the majority of the Russian internet ecosystem, as the beneficiaries of these trends. Yandex is our top pick in the Russian internet space (on the CEEMEA Focus List), offering the most price target upside in our coverage. It is Russia's largest search engine, with c.57% share; operates the dominant e-hailing company, Yandex.Taxi; owns the leading classifieds autos brand in Moscow, Auto.ru; and has a significant stake in Russia's largest e-commerce marketplace, Yandex.Market. Mail.ru is Russia's second largest Internet platform by market cap and scale of business. We believe its ownership of the two most popular social network sites in Russia – VK and OK – is the key to Mail.ru's success, and that it can continue to leverage their significant traffic to monetize other businesses (including games, classifieds and food delivery).

We would like to thank Roman Reshetnev for his contribution to this report.

The prices in this report are as of the market close of December 6, 2018, unless otherwise stated.

Russian Internet: Story in Numbers



World's largest market by number of Android Pay users (NFC technology)

Moscow is world's largest city by number of cars shared

Highest share of women registered on Tinder across the globe

INSTAGRAM MARKET SHARE

No. 1 market in Europe

No. 6 in the **World** by number of users

ENCOURAGING STATS

c.US\$ 1 bn

investments into Russian **e-Commerce** announced over the last 18 months

c.2 mn

VK Music reached c.2mn paid subscribers in just 2 years following the service launch

11th

Global rank of Russian-based mobile game developer **PlayRix** on mobile game revenues for 2017...

US\$ 880 & 420 mn

...Its **Gardenscapes** revenues hit US\$ 880 mn accumulated revenues, while **Homescapes** game earned US\$ 420 mn in just one year since the launch

Moscow has the **highest number of taxi licences** per capita among the world's largest cities...

...with the **highest level of satisfaction** according to a recent survey and one of the **lowest fares globally**

SHIFTING TRENDS

12%

decline in time spent on TV over the last 3 years in 35-44 age group with...

13%

...increase in mobile video watching over the last year (2Q2018 vs 2Q2017)

150% yoy increase in TV advertising budgets by internet companies during 9M18

4-5 minutes Moscow taxi ETA (estimated time of arrival) reduced significantly as compared to **30 min** prior to online aggregators launch (September 2017)

35% decrease in average ticket of taxi ride in Moscow during 2014-2017

ROAD TO PROFITABILITY

Yandex's ride hailing business became **profitable** in Russia in 3Q18 following 11 quarters of losses

1 bn+ Number of rides in Yandex.Taxi exceeded 1bn in less than 7 years post the service's launch in 2011

12 ppts Yandex market share growth on Android mobile devices following antimonopoly ruling vs. Google in April 2017

Ecosystem enablers

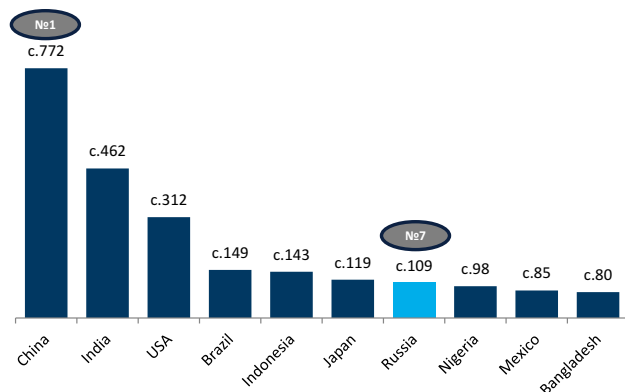
In our report Russia's internet champions positioned to keep US giants at bay, we highlighted seven key Russian ecosystem enablers that should allow domestic companies to maintain and even strengthen their already dominant competitive positions as well as further drive overall online market growth. These are: (i) a large internet population; (ii) a high quality and affordable telecom infrastructure; (iii) limited focus from international majors on the Russian market; (iv) access to an abundant and cheap IT skillset; (v) language/alphabet peculiarities; (vi) government support; and (vii) competition with global players forcing local companies to innovate.

A year later, we believe all enablers still hold — and note a few that are increasingly topical:

- **Internet penetration in Russia grew c.2% through 2017** (among 16+ population according to GfK), with Russia maintaining its position as the 7th largest internet population globally and the largest in Europe. The low-single digit growth rate suggests potential to test the levels of developed markets in the medium term, which in our view should encourage the major internet incumbents to ramp up investment.
- **Signs of some international majors retrenching:** Two major international players - Alibaba and Uber - decided to merge their Russian businesses with local partners, taking minority stakes in the respective joint ventures.
- **Mobile tariffs are even more affordable:** Russian mobile operators now offer unlimited data tariffs at less than US\$10 per month.
- **Government support has becoming increasingly visible over the last year**, with legislation that should help the growth of e-hailing; self-driving adoption; car sharing; and e-commerce, in our view.

Exhibit 1: Russia is the 7th largest economy in terms of internet users...

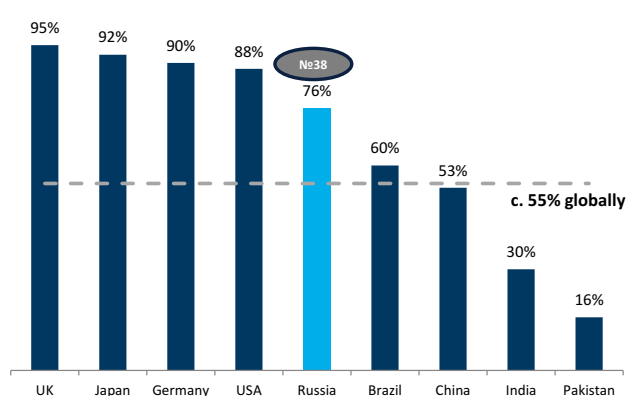
Number of internet users by country as of December 2017, mn



Source: InternetWorldStats

Exhibit 2: ...and ranked 38th globally in terms of internet penetration

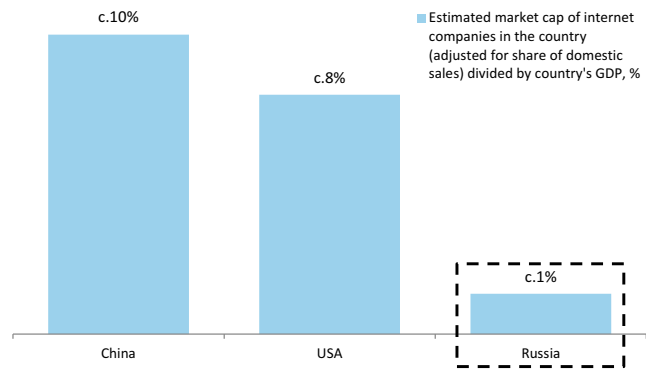
Percentage of individuals using the internet, 2017, %



Source: World Economic Forum, InternetWorldStats

Exhibit 3: The Russian internet sector market capitalization is significantly lower than China and the US as a share of GDP...

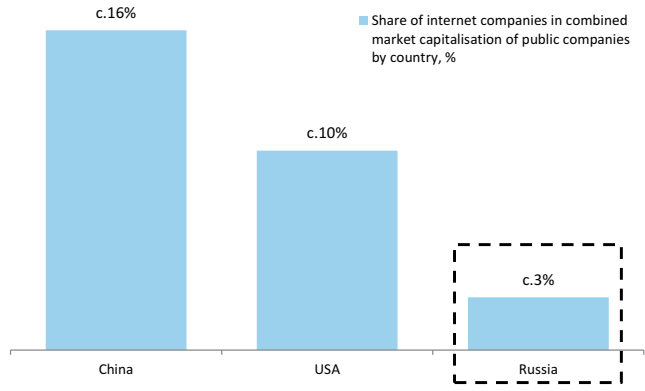
Market cap of public internet companies as % of GDP



Source: Euromonitor, Company data, Goldman Sachs Global Investment Research

Exhibit 4: ...as well share of the internet sector in the countries' total equity valuation

Market cap of internet companies as % of combined market cap of companies in the country



Source: World Bank, Goldman Sachs Global Investment Research

Key sector theme evolution — a year later

We review the five mid- to long-term themes in the Russian internet sector we identified in our 2017 report, highlighting what recent trends indicate for the outlook (most are well on track), and update our Russian internet ecosystem map.

Growth is set to continue

Over the last year, we have observed rapid growth across our **five key addressable markets**, with three — digital advertising, online taxi and classifieds — surprising to the upside.

Online advertising grew 22% yoy during 9M18 according to AKAR, tracking above our full year 2018 expectations of 19%. Notably, Yandex Search&Portal's revenue growth rate has accelerated this year, driven by share gains in mobile and the overall health of the online advertising market. Social networks were also ahead of our expectations: VK's (owned by Mail.ru) growth held at 54% in 9M18, and did not show any major signs of deceleration.

E-hailing is gaining marked traction, with online penetration ticking up from 8% in 2016 to 30% in 2017, by our estimates. Market leader Yandex.Taxi's revenue growth was above 300% yoy for 9M18 (still sizeable even if we take into account the consolidation of Uber since February 2018), driven by an increasing number of rides and higher take rate, with the company turning profitable in 3Q18. The segment growth was the main factor for our topline and EBITDA forecast upgrades for Yandex this year.

Classifieds also surprised to the upside (GSe +30% for 2017), with the market bolstered by high growth rates from Avito (+32% yoy in 2017 and 30% during fiscal 1H19 (Apr-Sep 2018)) and Yandex's Classifieds (+62% yoy in 2017 and 90% during 9M2018). We see this strong momentum continuing into 2019, and expect further support from the monetization of Mail.ru's Youla project (Mail.ru guides for Rub1-2bn revenues for Youla in 2018).






E-commerce, however, disappointed (13% in 2017 vs 25% GSe) on the back of sluggish consumer demand and lack of major initiatives from domestic online players (albeit several were in the process of raising capital). Drilling down, cross-border e-commerce has been growing ahead of our expectations. Russian consumers primarily purchased low ticket items according to AKIT, which gave a boost to cross-border trade. On the domestic side, major e-commerce players were in a transition phase this year, with strategic alliances formed (Yandex/Sberbank; Alibaba's AliExpress Russia JV) and management team changes (new CEOs at Yandex.Market, AliExpress Russia and Ozon).

But, as argued in our 2017 report, we see e-commerce as the major opportunity for the domestics long term — and this year we saw them start to position: In the past 18 months, the top 3 players announced plans to inject more than US\$1bn into e-commerce development.

Despite Youla matching market-leader Avito in terms of mobile daily reach, Avito's revenue growth was unaffected (>30% yoy growth in April-September 2018) and EBITDA margin expanded (to 65% from 60%).

Exhibit 5: We see e-commerce as the largest part of the Russian internet sector today and in the long term

Five pillars of Russian internet

Key metrics	E-commerce	Digital advertising	E-hailing	Gaming	Classifieds
					
Total addressable market 2030E, USDbn	771	19	20	4	3
Online penetration 2030E, %	11%	63%	75%	100%	100%
Online size 2030E, USDbn	88	12	15	4	3
2017-30E CAGR, %	13%	12%	14%	7%	14%
Online size 2017, USDbn	17.8	2.9	2.6	1.7	0.5
Online penetration 2017, %	5%	40%	30%	100%	100%
Key players*	Aliexpress Yandex.Market Ozon	Yandex Google Mail.Ru	Yandex.Taxi Vezet Gett	Playrix Mail.Ru	Avito Youla HeadHunter
Top-2 market share 2017, %	26%	78%	83%	na	74%

*Based on MAUs for E-commerce and Classifieds; Revenues/GMV for digital advertising / e-hailing

Source: AITC, AKAR, NewZoo, Company data, SimilarWeb, Goldman Sachs Global Investment Research

Creation of new platforms and niches

The ecosystems of Yandex and Mail.ru are continuously evolving, adding new monetization opportunities and niches to existing sub-segments. They are also becoming more complex, with the boundaries between sub-segments blurring. For instance, Yandex.Zen, having started as a recommendation service for personal newsfeeds, now offers social network features such as short posts and commentaries. Smart speaker Yandex.Station integrates services such as Search, weather and music (all through virtual assistant Alice). In the food delivery business, they are expanding onto complimentary Food tech segments (e.g. Yandex's acquisition of meal kits service Food Party; development of cashback services Edadeal and Checkback by Yandex and Mail.ru, respectively). In e-Hailing, Mail.ru entered the segment this year with a minority investment in online taxi company CityMobil. The mobility business includes a wide variety of niche services such as car sharing and bus ticket services, which suggests further room for expansion and integration opportunities.

We believe both YNDX and MAIL will continue to leverage ecosystem synergies between their services in the medium term and be more active in expansion. Yandex,

for example, is creating subscription models (Yandex.Plus, which we would expect to accelerate growth through new services additions). MAIL plans to ramp up product/services cross-selling within its ecosystem, for example by integrating Delivery Club and CityMobil applications into VK social network.

On a longer-term view, comparing the structure of the US and Chinese Internet markets relative to Russia's and the verticals in which the two are absent or have minimal presence, we see untapped opportunities in FinTech; e-commerce; Messengers; Local services; Content (video; music); Gaming (given a structural advantage of Russia in labor cost and Tech talent); Cloud; Food tech solutions; and online Travel, Education and Health.

Exhibit 6: The Russian internet sector is predominantly controlled by Yandex and Mail.ru; however, most sub-segments have multiple domestic and international competitors

Key players in the Russian internet market by main sub-segments

The Ecosystem

Exposure to main internet sub-segments

		Yandex	@mail.ru group	Google	facebook	Others (domestic)	Others (international)
Digital advertising	Search	Yandex Alice***	Mail.ru	Google Google Assistant***		Rambler	
	Social networks	Yandex. Zen	Vkontakte Odnoklassniki		Facebook Instagram		Twitter Snapchat TikTok
E-commerce	Domestic	Yandex.Market Beru 6epu!	Tmall Tmall**			Ozon Lamoda Goods.ru Wildberries	Tmall Tmall
	Cross-border	Bringly	Pandao AliExpress** AliExpress			Joom	AliExpress Aliexpress
Mobility	Online Taxi	Yandex.Taxi Uber	Citymobil*			Vezet Citymobil Maxim inDriver	Gett
	Other (digital)	Yandex.Drive Yandex. Buses Yandex. Auto				Busfor BelkaCar Delimobil	BlaBlaCar
Classifieds		Auto.ru Yandex.Real Estate	Youla			CIAN HeadHunter SuperJob Drom.ru	Avito
Food tech		Yandex.Eats Edadeal	Delivery Club ZakaZaka			Instamart Utkonos	
Video	User-generated content	Yandex.Video	Vkontakte Odnoklassniki	Youtube.com		Rutube	
	Online cinema	KinoPoisk				Ivi.ru Okko Megogo Amediateka	iTunes
Messengers			VK TamTam ICQ		WhatsApp Facebook Messenger		Viber Telegram Skype

*Minority stake

** In case of Alibaba, Mail.ru, MegaFon and RDIF's completion of ecommerce JV deal in Russia

***Virtual assistant

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 7: Yandex and Mail.ru have a significant presence in other sub-sectors

Key players in the Russian internet market by sub-segment

The Ecosystem

Exposure to other internet sub-segments

		Yandex	mail.ru group	Google	facebook	Others (domestic)	Others (international)
Travel	OTA					Ostrovok.ru OneTwoTrip tutu.ru Ozon. Travel Tinkoff. Travel	Booking.com Airbnb TripAdvisor
	Metasearch	Яндекс Путешествия Yandex. Travel				Aviasales	Skyscanner Trivago
Maps		Yandex.Maps Yandex.Navigator	MAPS.ME	Google Maps		2GIS	
Music		Yandex. Music	VK Music Boom*	YouTube Music			Apple Music
Cloud		Yandex. Cloud	Cloud Mail.ru	Google Cloud			AWS Microsoft Azure iCloud
Services / Transactional marketplaces		Яндекс Услуги Yandex. Services				Profi.ru YouDo CarPrice	Avito
Payment/Fintech		Yandex.Money*	VK Pay			Sberbank Yandex.Money Tinkoff Bank WebMoney Qiwi	Alipay PayPal
Mobile Games (eSports)			Mail.ru Pixonic Esforce Holding			Playrix ZeptoLab Game Insight	
Online Health		Yandex. Health Doc+* Idoc+				Doc+ DocDoc	
Online Education			GeekBrains			Skyeng Netology	Coursera
Email		Yandex.Mail	Mail.ru	Gmail			Yahoo
News		Yandex.News Yandex. Zen	Mail.ru	Google News		Ria Rambler RBC VGTRK	
Weather		Yandex.Weather	Mail.ru			Gismeteo	

*Minority stake

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 8: Yandex and Mail.ru still control the major part of key players in various Russian internet segments

Top 3 websites/apps in key segments of Russian internet by monthly active users, June 2018

Service	1st Place	2nd Place	3rd Place
Search*	Yandex (55.4%)	Google (40.9%)	Mail.ru (2.1%)
Social networks**	VK.com (39mn)	Instagram (26mn)	Odnoklassniki (22mn)
E-commerce	Aliexpress.com (22mn)	Yandex (17mn)	Ozon.ru (8mn)
Online taxi	Yandex (73mn rides)	Vezet (41mn)	Gett (na)
Classifieds	Avito.ru (51mn)	Youla (25mn)	HH.ru (18mn)
Food delivery	Delivery Club	Yandex.Eats	ZakaZaka
Video***	Youtube.com (44%)	VK (38%)	Yandex (35%)
Messengers	WhatsApp (28mn)	Viber (21mn)	Telegram (10mn)
Maps	Yandex.Navigator	2GIS	Yandex.Maps
News	Yandex	Mail.ru	Ria.ru (10mn)
Email	Mail.ru	Yandex	Gmail
Weather	Yandex	Gismeteo.ru (10mn)	Mail.ru
Travel	Booking.com (6mn)	Airbnb.ru	Ostrovok.ru

*total blended share in Jul-18, according to Yandex.Radar

**desktop&mobile data for 12-64 year old citizens of 100k+ population cities, June 2018

***Desktop, Monthly Reach, % of population; data for 12-64 year old citizens of 100k+ population cities, August 2018

	-Yandex
	-Mail.Ru
	-International players
	-Russian players other than Yandex and Mail.Ru

Source: SimilarWeb, AppAnnie, Company data, MediaScope, Goldman Sachs Global Investment Research

Further market consolidation

Over the last 18 months we have observed several examples of international players deciding to cooperate with local partners. We view complexity of the local business and existence of strong domestic players as key reasons for those strategic consolidation decisions. In February of this year, Yandex completed its merger with Uber (Uber retained a minority stake). Most recently, in September 2018, Alibaba announced it would form an e-commerce JV with local players (Mail.ru, MegaFon, RDIF), leveraging AliExpress Russia.

Despite significant growth opportunities and relatively good access to capital (which suggests favoring organic growth over M&A), we are already seeing market consolidation in highly fragmented or emergent niches, such as Yandex's acquisition of FoodFox, a food delivery service, and meal kits company Food Party.

We expect consolidation to continue due to, for example, a company facing funding issues or needing a local presence, or when it is only possible to create shareholder value after competition is eliminated. We would expect further consolidation particularly

in e-commerce (as discussed later), Food Tech and O2O services (the latter two which are currently cash-burning, suggesting consolidation may unlock value).

Government support of the internet sector

We believe it is in the interests of the government to support the internet sector; increasing usage/penetration would improve economic and execution efficiency, in our view (through the shift of government services to online; the introduction of VAT/import duties on international e-commerce to align competitive positioning). When we published our report last year, there had been little direct Government involvement in Internet development, but we are now seeing some encouraging signs. For example, the Government adopted a gradual reduction of import duty exempt threshold for cross-border e-commerce, although this does not appear to have slowed down cross-border activity in favour of domestic trade. Online sales of wine, OTC medicine, and jewellery, were they to be permitted, could provide a further boost for e-commerce penetration, in our view.

Recent legislation looks favourable, in our view, for sub-segments such as self-driving cars (in November 2018, the Government permitted self-driving cars to be operated on public roads in Russia); online taxi (through simplifying the process of driver registration and eliminating intermediary companies; State Duma adopted a law on self-employment on November 15); Cloud (support/requirement to store data locally, which may boost local cloud services market); and car sharing (Moscow Government is supporting ride sharing by granting free parking in the city centre).

Exhibit 9: Moscow Government's support is facilitating e-hailing adoption, in our view, which has the greatest penetration among major global cities and, according to survey data, the highest level of satisfaction

Report by McKinsey Center for Government: Smart city solutions: What drives citizen adoption around the globe?

City	Taxi licenses per 1,000 citizens	Level of satisfaction, %*	Cost per 1 km per average salary, %**	Penetration, %***
Moscow	4.9	95	0.05	81
Singapore	4.4	92	0.02	72
Mexico City	3.7	85	0.08	74
Seoul	3.0	86	0.07	55
New York City	3.0	90	0.07	53
London	2.3	89	0.07	33
Hong Kong	2.1	74	0.06	64
Shanghai	2.0	87	0.04	78
Berlin	2.0	76	0.11	19
Sao Paulo	1.8	88	0.11	82
Paris	1.6	90	0.09	54
Tokyo	1.3	79	0.13	14

*Divided by urban area (metropolitan area) population as provided by Demographia World Urban Areas

**Average cost of trips in Uber/DiDi for China, average salary after tax

***Have you used one of those app: e-hailing which lets you order a driver/taxi through an app?

Source: McKinsey & Company

Industry self-regulation is an important pillar of the regulatory framework. A major notable agreement was reached between market participants in 2018 on video content legalization, prompting Internet companies to agree on piracy link removal.

We are seeing movement in regulatory compliance oversight. In April 2018, the Russian telecom watchdog blocked Telegram messenger for regulatory non-compliance (Telegram didn't provide encryption technology to special services) More recently, there were media reports (subsequently discounted by the Government) that the Russian authorities may introduce impose harsher fines on technology firms that fail to comply with Russian laws (Reuters, November 26, 2018). The plan reportedly proposed amending the legislation so that a company not complying with the rules is subject to a fine equal to 1ppt of its annual revenue in Russia. The Reuters article mentioned that Facebook has not moved servers containing Russian users' data to Russia yet while Google is alleged to have failed to comply with requests to remove search results for organisations that are banned in the country.

More competition between Yandex and Mail.ru

Competition between Yandex and Mail.ru's ecosystems is a clear trend in Russia, as we expected, with the overlap between their different sub-segments increasing each year. Although this is worrying, it is not unique to the global internet space, and we have not seen major value dilution yet.

- The most visible example is **Food Delivery**, where both companies are aggressively subsidising to become the dominant player (MAIL entities held the #1 and #3 positions, Yandex #2 based on active users (Exhibit 8)). While competition is intense, we note that the magnitude of losses in these businesses has been limited to single digits of the companies' annual EBITDA.
- The two now overlap in **e-hailing**, with Mail.ru entering the market this year via a minority investment in CityMobil Taxi company. Mail.ru has said that it views the economics in online taxi as poor, but that it likes the product proposition.
- In **social networks**, Yandex's ambitions in personalized newsfeed Zen could pose a competitive threat to Mail.ru's VK, although Yandex has yet to gain traction to dilute significant user engagement from Mail.ru.

We would note that Mail.ru doesn't have the same financial resources as Yandex to compete in lossmaking sub-segments: As of the end of 3Q2018, MAIL had c.US\$150mn net cash on the balance sheet vs Yandex's US\$1.4bn (including Taxi); the pending AliExpress JV requires it to commit a cash injection along with the contribution of Pandao e-commerce platform and distribution product integration (the exact amount of cash is not disclosed). On the 3Q18 results call, Mail.ru management noted that new strategic alliances, partnerships and capital structure alternatives are under discussion. It has already made a step in this direction with the announcement that it is considering the deconsolidation of the O2O platform (Youla, Delivery Club).

Exhibit 10: Yandex and Mail.ru's competition in key Russian internet segments in 2014...

Russian market in 2014

Service	Yandex	Mail.Ru
Search	✓ Y	✗
Social networks	✗	✓ VK OK
E-commerce	✓	✗
Online taxi	✓	✗
Classifieds	✓	✗
Food delivery	✗	✗
Games	✗	✓
Cloud	✗	✗
Payment / Fintech*	✓	✗
Music**	✗	✗

*Through minority stake in Yandex.Money for Yandex

**Not monetized

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 11: ...and in 2018

Russian market in 2018

Service	Yandex	Mail.Ru
Search	✓ Y	✗
Social networks	✓	✓ VK OK
E-commerce*	✓	✓ TMAIL Aliexpress
Online taxi**	✓	✓
Classifieds	✓	✓
Food delivery	✓	✓
Games	✗	✓
Cloud	✓	✓
Payment / Fintech***	✓	✓ pay
Music	✓	✓

*In case of Alibaba, Mail.ru, MegaFon and RDIF's completion of ecommerce JV deal in Russia

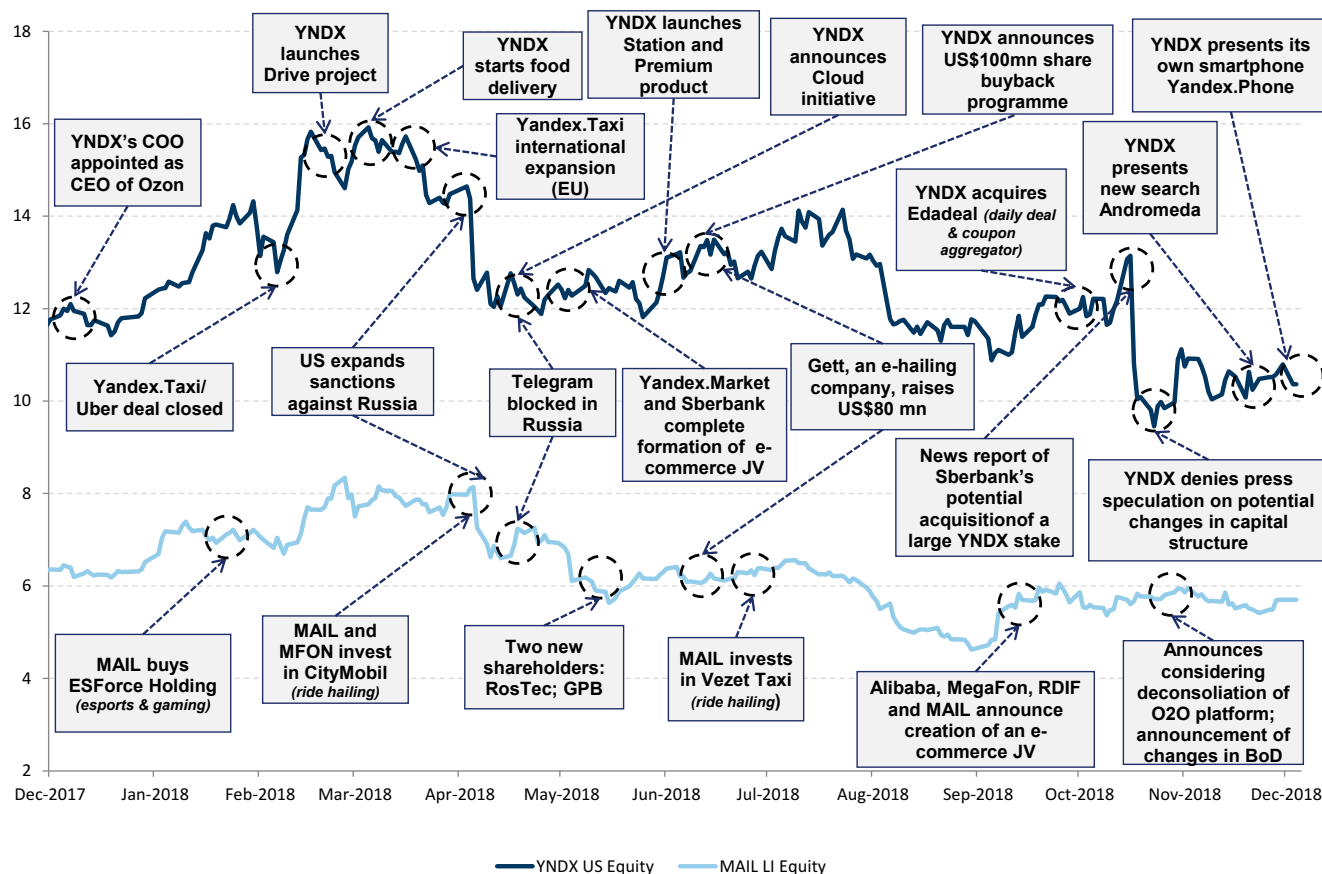
**Through minority stake in CityMobil for Mail.ru

***Through minority stake in Yandex.Money for Yandex

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 12: Key developments in the Russian Internet sector over the last year

Selected facts about Russian internet; Yandex and Mail.ru market cap progression, US\$ bn



Source: Datastream, Company data, Goldman Sachs Global Investment Research

Addressing key investor concerns about the largest internet sub-segments

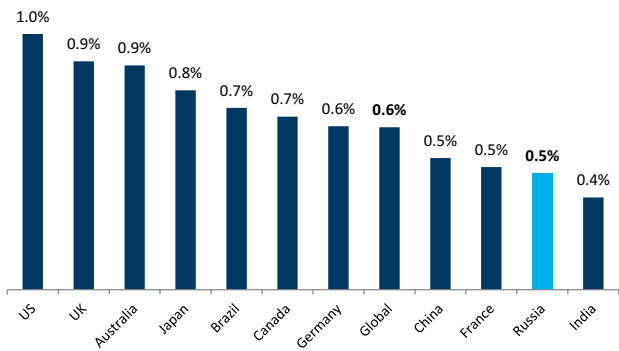
We address the three key questions that come up most frequently in our client conversations about Russian Internet fundamentals: Digital advertising growth sustainability; Yandex’s e-hailing economics; and long-term winners in e-commerce and the investment required to get there.

Digital advertising: Will double digit growth sustain in the medium term?

We believe yes, unless Russia faces significant macro shocks. The Russian advertising market still looks underpenetrated compared to global levels (0.5% share of 2017 GDP versus the 0.6% global average). The share of digital advertising within total ad budgets is also below the global level. We see a continued rise in the number of internet users and usage (i.e., time spent) supporting double digit digital advertising growth in the medium term. We forecast digital advertising to account for c.63% of total ad market share by 2030E, up c.20ppt vs the 2018E level of c.43%, and a 2017-2030E CAGR of 12%, broadly in line with the global trend.

Exhibit 13: Russia is underpenetrated in terms of ad spend as % of GDP...

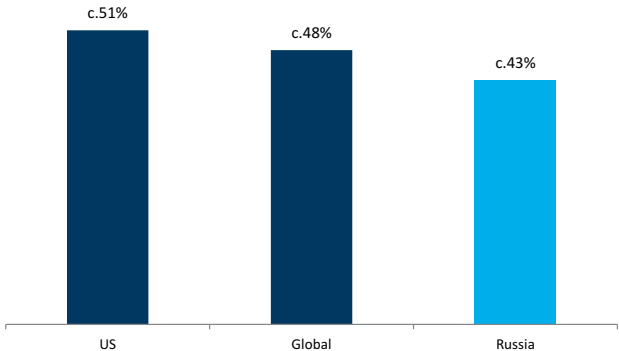
Advertising market as % of GDP by country, 2017



Source: Euromonitor, MagnaGlobal

Exhibit 14: ...and digital ad share within total ad budgets is also below the global level

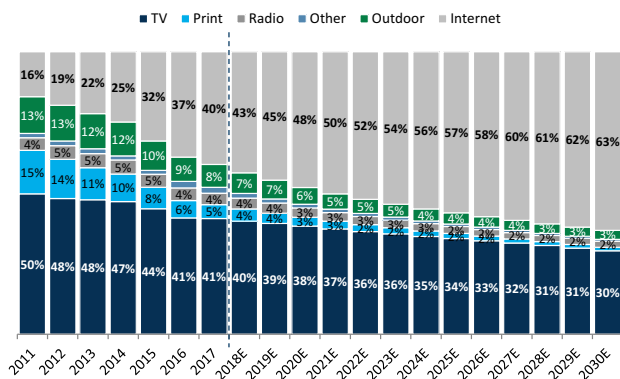
Digital advertising penetration in 2018E, %



Source: MagnaGlobal, Goldman Sachs Global Investment Research

Exhibit 15: We expect digital to be the predominant advertising channel in the Russian market in the long run...

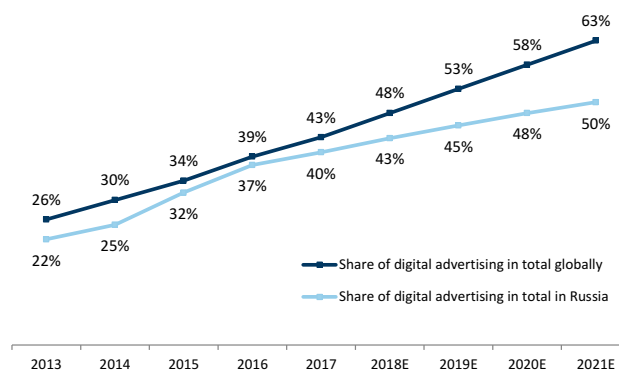
Russian advertising market split by category, %



Source: AKAR, Goldman Sachs Global Investment Research

Exhibit 16: ...although we are a bit more conservative on the pace of market share gains vs GS global digital advertising forecast

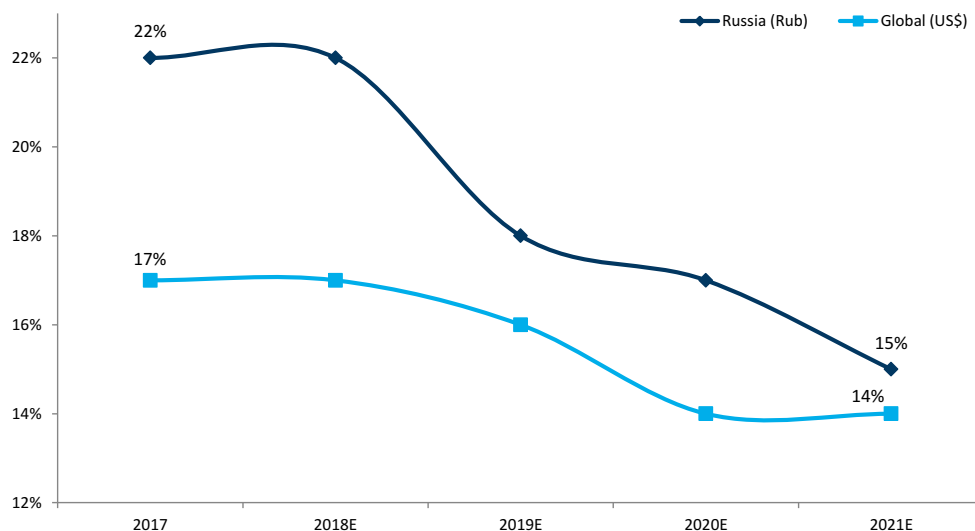
Share of digital advertising in Russia and globally, %



Source: MagnaGlobal, AKAR, Goldman Sachs Global Investment Research

Exhibit 17: We expect Russian digital advertising growth to gradually decelerate to global levels by 2021E

Russia vs. Global digital advertising market growth, % YoY



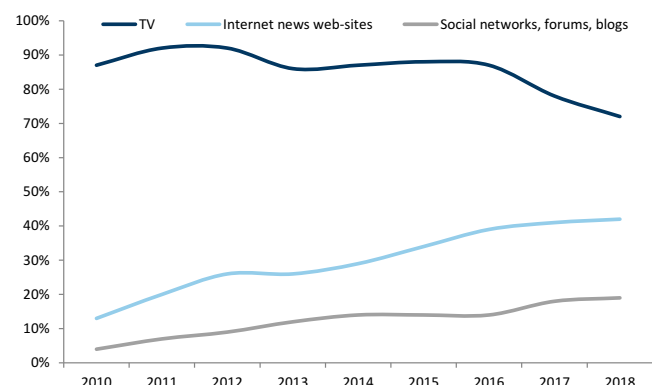
Source: MagnaGlobal, AKAR, Goldman Sachs Global Investment Research

Consumer engagement is moving to digital — and advertising budgets will follow

Advertising budget allocation is highly correlated with time spent on a particular medium. Internet in Russia is currently ranked third in terms of time spent on desktop and mobile, while TV viewing is weathering continuous audience declines — a trend we expect to continue as consumers' media consumption increasingly shifts online. Thus, we forecast advertising budget allocation will skew towards online (desktop, mobile) vs other advertising mediums.

Exhibit 18: TV is becoming a less relevant source for news and information in Russia, while Internet and social networks are gaining in popularity

% of total respondents to the question: "From what sources do you most often find out news, information?"

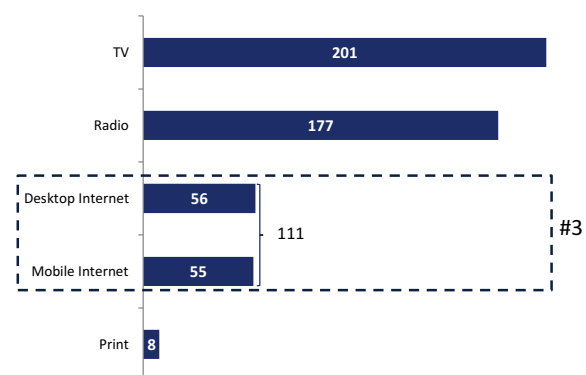


Poll participants include 1,500 respondents in 53 regions of the Russian Federation

Source: FOM Russia

Exhibit 20: Internet is the third largest media in Russia in terms of time spent per day...

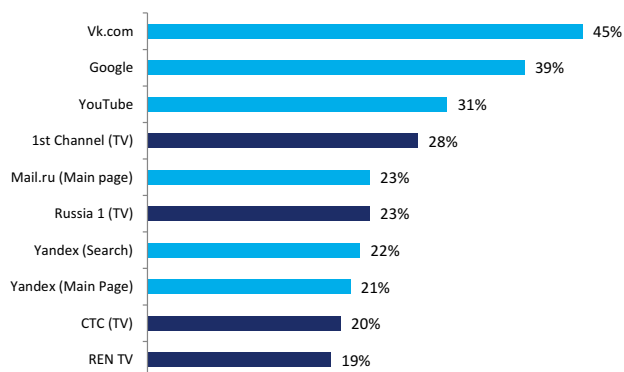
Average daily time spent (min), Russia 100k+ cities, 1H18



Source: Mediascope, M'Index, TV Index, R-Index, Publicis Media

Exhibit 19: Websites have broader daily reach vs TV channels

Average daily reach of main TV channels and top websites (Top 10; incl. Desktop & Mobile), %, June-18

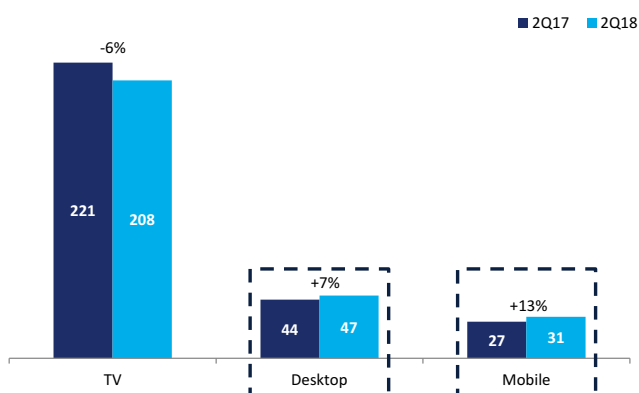


Russia 100k+ cities, age 18-54

Source: Mediascope, Publicis Media

Exhibit 21: ...while TV viewing is declining

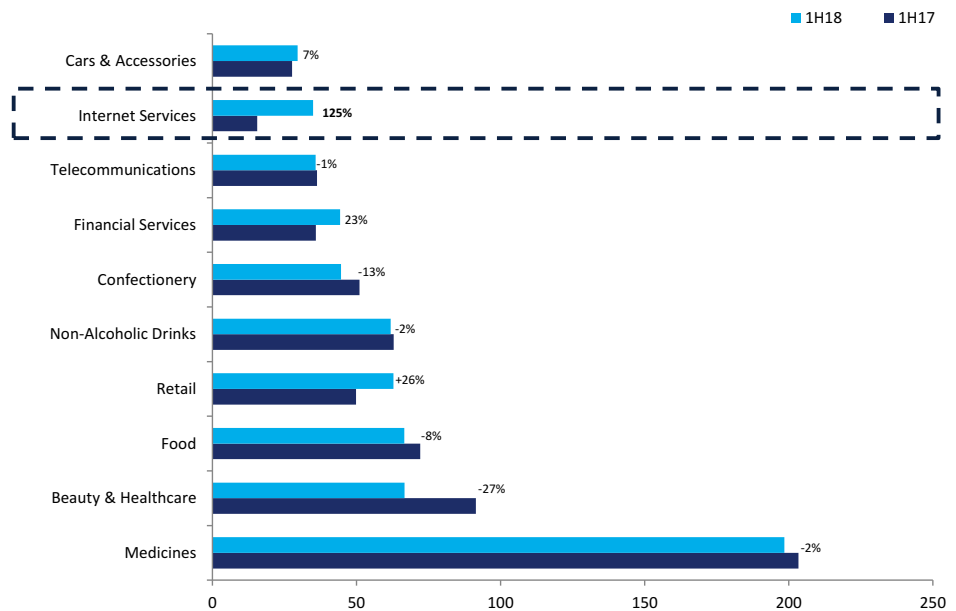
Time on Video watching, min/day



Source: Mediascope, Espar

An interesting trend we observe is that in 1H18 Internet services advertising was a key driver of the TV advertising market, up 125% yoy in terms of Gross Rating Points, while many categories showed double digit declines. While Internet services ads represent just c.5% of total GRPs, rapid growth of online businesses (e-commerce, especially) should create a base for further TV share ramp up, in our view. This is a virtuous circle: consumers' continuous exposure to internet services on TV should build brand/market awareness initially, in our view, and over time push users to migrate online with more intensive use of the internet (at the expense of TV) — with the advertising spend to follow the eyeballs.

Exhibit 22: Russian Internet advertising is a significant driver for TV ad market growth
Top-10 National TV Categories by 30" GRPs 18+, 1H18 vs 1H17

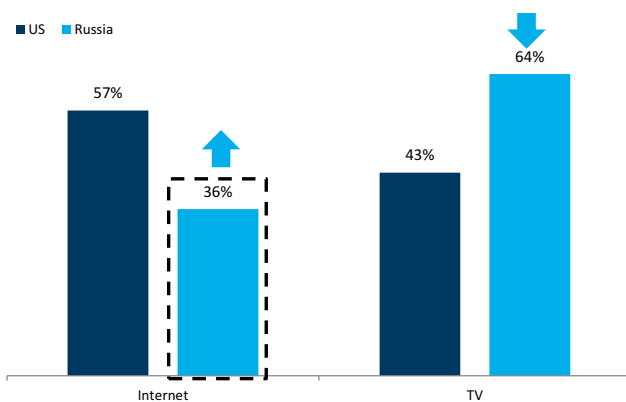


Source: Mediascope, Publicis Media

We believe US share of time spent vs advertising budget allocation is a good proxy for the upside potential for the Russian market. Time spent is 57% in favour of Internet vs TV in the US, while the share of internet of total advertising spend is c.56%, driven primarily by mobile advertising. We expect Internet time spent to catch up with US levels as well as the respective budget allocation over the medium term.

Exhibit 23: Internet time spent is significantly lower in Russia compared to US levels...

% of Internet vs TV out of total Media time, 2017 for US; 1H18 for Russia

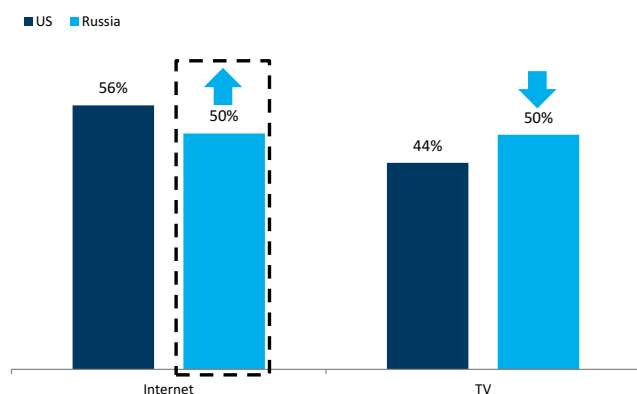


Note: Total Time Spent is calculated as a sum for TV and Internet

Source: Kleiner Perkins, Mediascope, Publicis Media

Exhibit 24: ...implying upside for ad budget allocation as TV falls further and Internet penetration / engagement increases

% Internet vs TV ad spending out of total advertising spending, 2017 for US; 1H18 for Russia



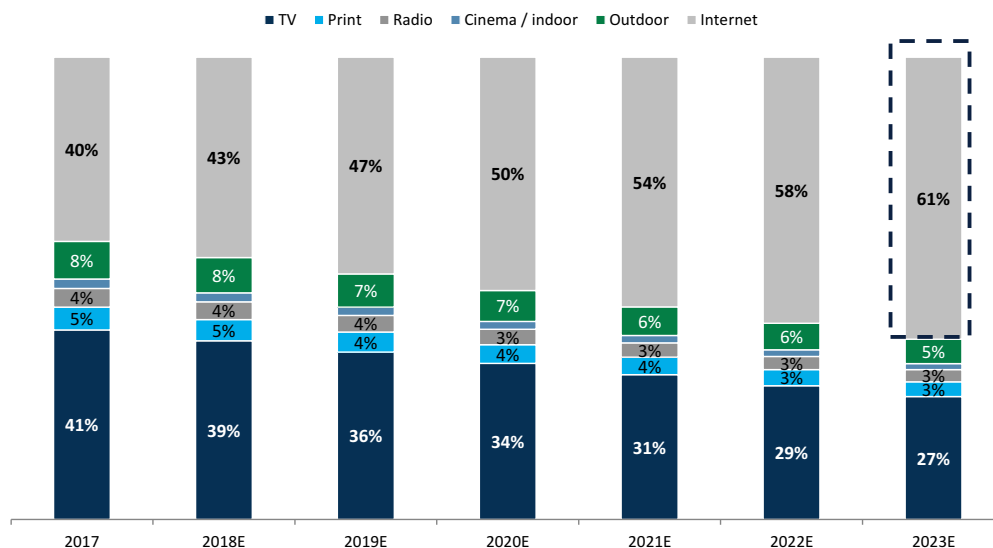
Note: Total advertising spend is calculated as a sum for TV and Internet

Source: Kleiner Perkins, Mediascope, Publicis Media

As a sensitivity, all else equal, if we assume 20% p.a. growth in digital advertising, while all other mediums grow with an “inflation rate” of 4%, digital advertising would only reach 61% of the total ad market by 2023E (still below 2021E global level of 63%). This suggests upside potential to our base case forecasts (54%) should we see, for example, marginal macro improvements or a slightly higher-than-expected shift of the population online.

Exhibit 25: A hypothetical scenario of 20% annual internet advertising growth implies c.60% share advertising spend in Russia by 2023E

Russian advertising market split by category, assuming internet advertising is growing at 20% CAGR vs others at 4%



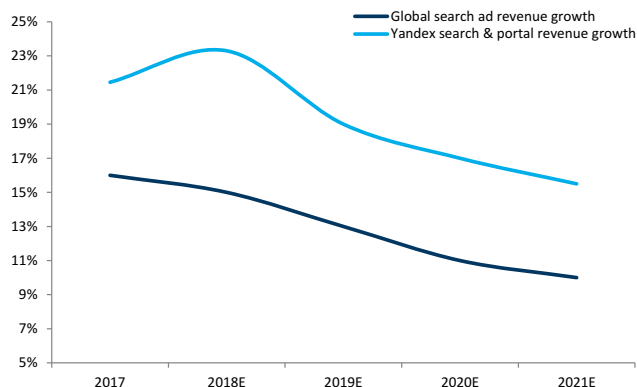
Source: AKAR, Goldman Sachs Global Investment Research

What does this mean for Yandex and Mail.ru?

Online advertising is a key segment for both Yandex (online search) and Mail.ru (social networks). We consider our assumptions for Yandex’s and Mail.ru’s advertising growth fairly conservative compared to GS estimates for global dynamics of Search revenue progression and for the global social network revenue outlook, respectively. Specifically, our forecast for Yandex Search & Portal growth deceleration is largely in line with global search progression (Exhibit 26): We expect higher nominal growth for Yandex given higher Russian inflation vs global levels and also a high growth contribution from monetization of Zen and images. For Mail.ru, we expect advertising growth to be marginally below global social networks growth given a slightly dilutive impact of non-social ad contribution and market share loss of OK social network (Exhibit 27).

Exhibit 26: We see a similar trajectory for Yandex's advertising growth compared to the global dynamics of Search revenue progression...

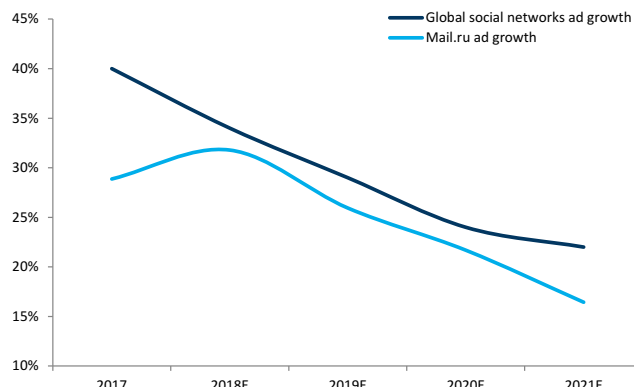
Yandex search & portal revenue growth vs global search advertising revenue growth



Source: Magna Global, Company data, Goldman Sachs Global Investment Research

Exhibit 27: ...and the same is true for Mail.ru advertising growth compared to social networks global revenue

Mail.ru advertising growth vs global social networks advertising growth



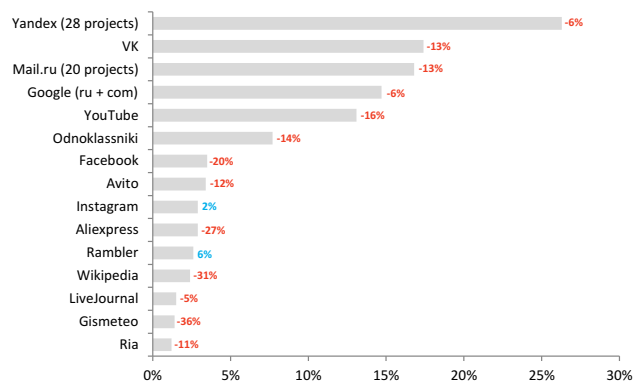
Source: Magna Global, Company data, Goldman Sachs Global Investment Research

Mobile advertising: A large untapped opportunity

Internet time spent is increasing, but mobile rather than desktop is the largest beneficiary of the trend. Russia lags developed markets in terms of mobile advertising monetization, but in the medium term we expect Russia to follow the global trend of faster growth in mobile vs desktop. According to Mediascope, in Russia desktop daily reach is declining across most popular websites, while mobile daily reach is on the rise.

Exhibit 28: Daily reach of top-15 desktop websites is declining...

Daily reach of top 15 desktop websites and change, YoY% (as of Aug-18)

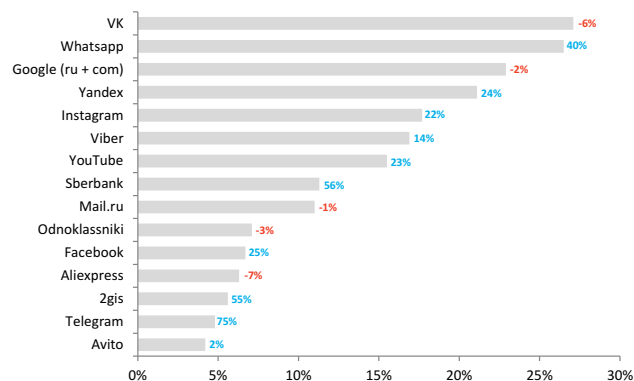


Russia 100k+ cities, 12-64 years old

Source: Mediascope

Exhibit 29: ...while mobile reach is increasing, most notably for messengers

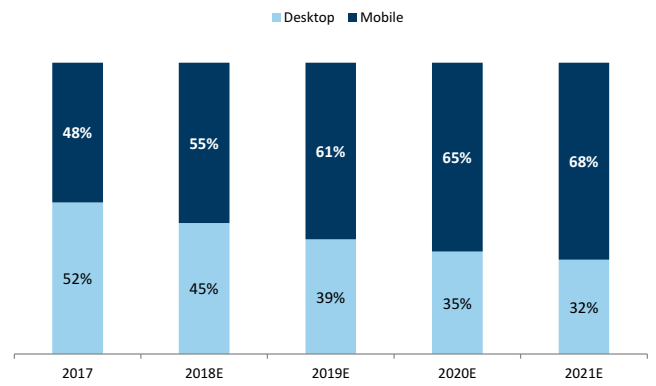
Daily reach of top 15 mobile projects and change, YoY% (as of Aug-18)



Russia 100k+ cities, 12-64 years old

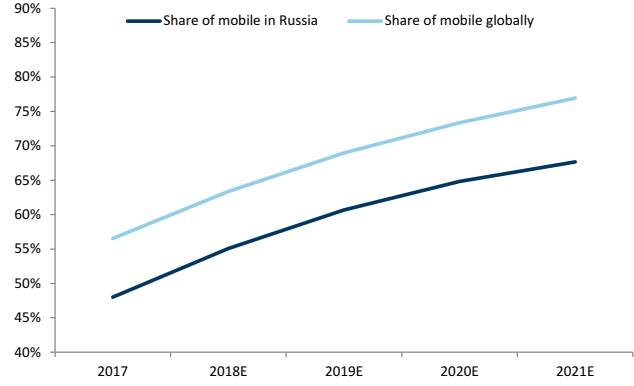
Source: Mediascope

Exhibit 30: We expect Russian advertising to shift towards mobile...
Russia online advertising market split desktop vs. mobile



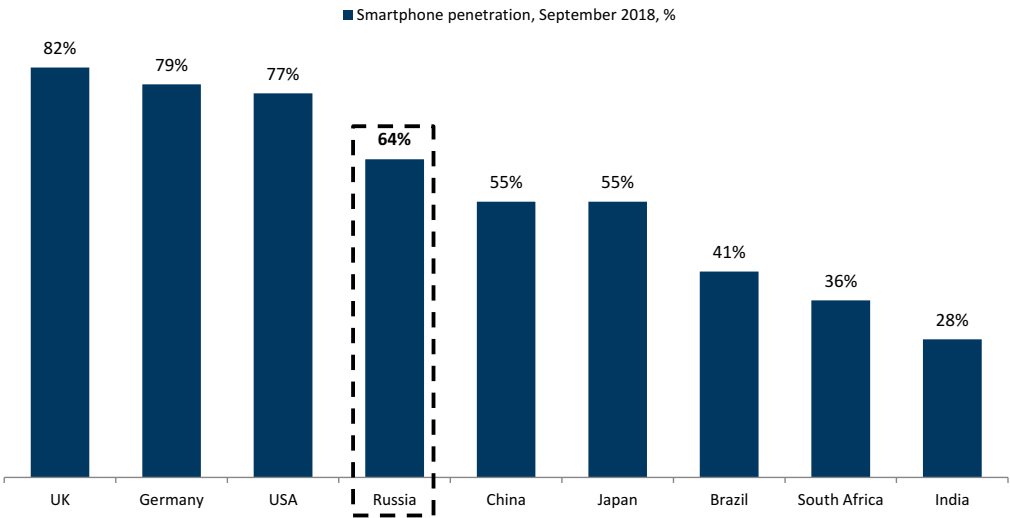
Source: AKAR, Zenith Mobile Advertising Forecasts 2017, Publicis Media, Goldman Sachs Global Investment Research

Exhibit 31: ...similar to the global advertising trajectory
Share of mobile search revenues in Russia vs. globally



Source: Magna Global, AKAR, Zenith Mobile Advertising Forecasts 2017, Publicis Media, Goldman Sachs Global Investment Research

Exhibit 32: Smartphone penetration in Russia is ahead of many EM countries, but below DM levels

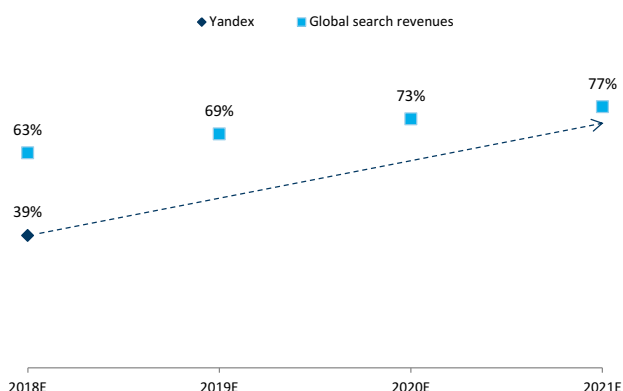


Source: NewZoo

On our estimates, Yandex mobile advertising (relative to desktop) is significantly undermonetized compared to the global search level, as are MAIL's social networks. On our three-year forecasts, we have both moving close to the worldwide averages, benefiting from the overall growth in the mobile ad market as well as increasing smartphone penetration (especially with larger screen sizes) and better audience targeting.

Exhibit 33: Yandex mobile is significantly undermonetized compared to global search levels, on our estimates,...

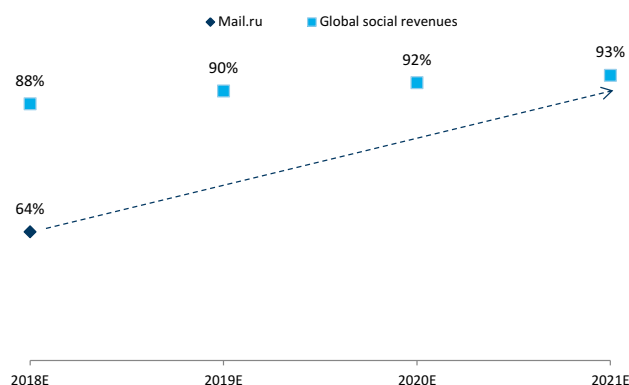
Yandex share of mobile advertising revenues (as % of total ad revenue) vs global levels



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 34: ...which is also the case for MAIL's social networks

MAIL share of social advertising revenues in mobile (as % of total) vs global levels



Source: Company data, Goldman Sachs Global Investment Research

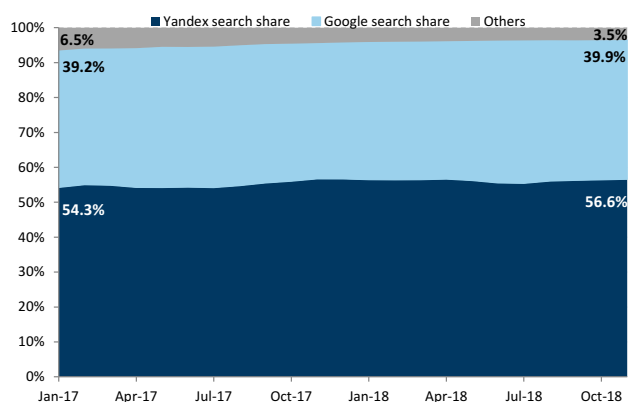
Yandex: Market share momentum on the back of regulatory tailwind, continuous product improvements and brand strength

12 ppts: Yandex market share gain on Android mobile devices following the antimonopoly ruling vs Google in April 2017

In our [2017 Internet report](#), we argued that search market share loss by Yandex should revert following the Google/Russian Federal Anti-Monopoly Service (FAS) lawsuit resolution (reached on April 17, 2017) and, post this, Yandex could increase its traffic share on Android to 50%-60% (and raise its overall combined desktop and mobile search share from the current 55% to c.58% in the mid term). As of October 2018, Yandex had hit the high end of our forecast range: Total search share is c.57%, while share on mobile (Android) is approaching 50% (up from c.36% post the deal resolution in April 2017). In our view, Yandex is well positioned to increase search market share from current levels on the back of constant product improvements and roll out of new search-related technologies. In particular, Yandex's voice assistant Alice, launched in October 2017, has reached 30mn MAUs driven by initial integration of the technology into Yandex.Browser. The company's initiatives to build out additional services and products around its existing platform (e.g. launch of smart home assistant Yandex.Station and Yandex's own smartphone, new search system Andromeda) should be positive for user engagement. In addition, we believe that Yandex's mobile traffic is underpenetrated compared to the desktop, which in our view creates upside potential for search revenues once the mobile ecosystem starts to operate at full scale.

Exhibit 35: Yandex is the leading search engine in Russia with a growing market share...

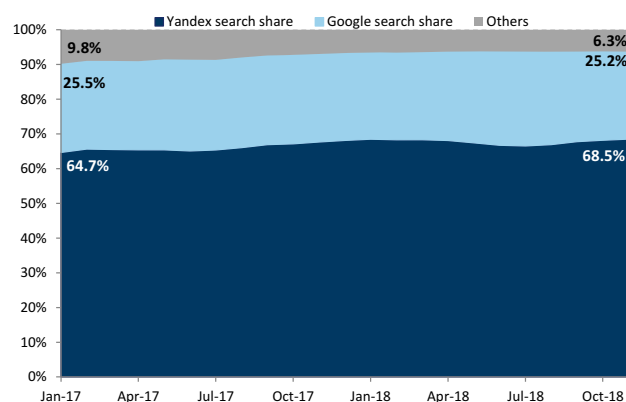
Yandex vs. Google overall search market share in Russia, %



Source: Yandex. Radar

Exhibit 36: ...driven by both rising desktop market share...

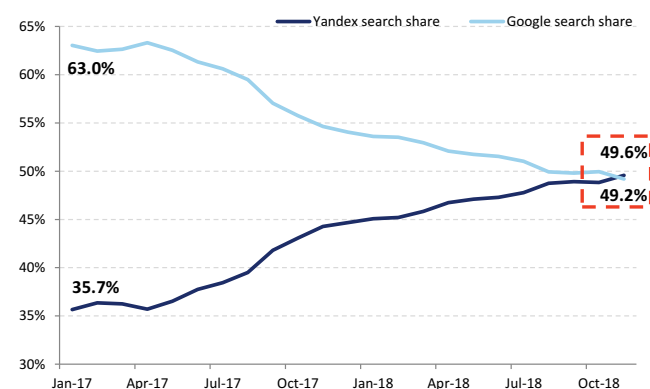
Yandex vs. Google search market share on desktop in Russia, %



Source: Yandex.Radar

Exhibit 37: ...and mobile market share

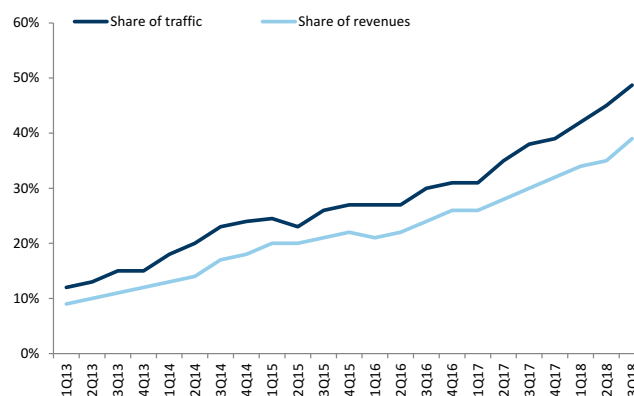
Yandex vs. Google search market share on mobile in Russia (Android), %



Source: Yandex. Radar

Exhibit 38: Mobile search traffic is still undermonetised versus desktop

Yandex share of mobile in traffic and revenues, %

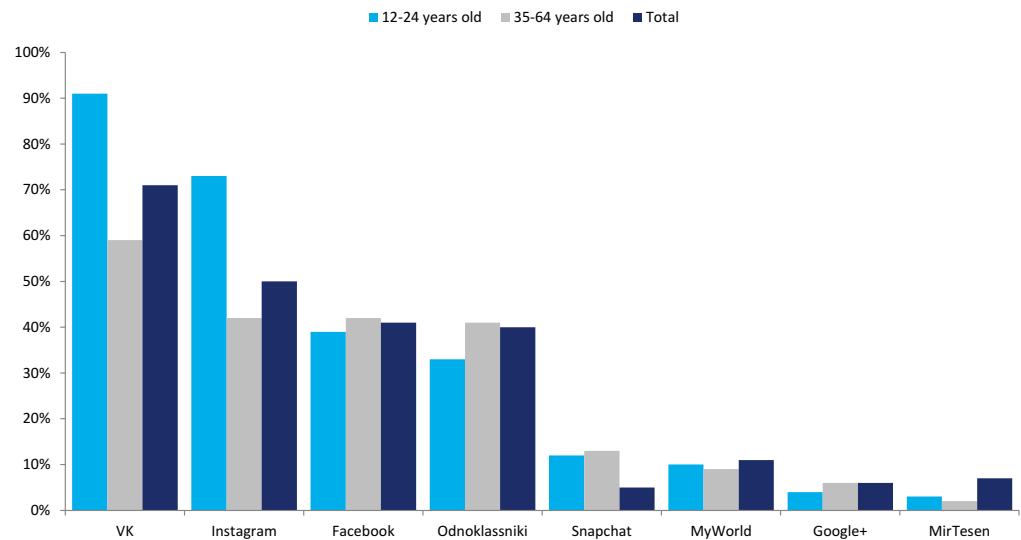


Source: Company data

Mail.ru maintains dominant position in social networks; Instagram increases in popularity

Mail.ru's VK remains the largest social network in Russia across all age groups. VK's dominance is especially strong among the younger population (12-24 years old) and it also has the highest reach among adults over 35 (Exhibit 39). While Instagram continues to increase in popularity (this year displacing Odnoklassniki from the no. 2 position based on users (Exhibit 8)), it is still far short of VK in terms of both monthly reach and time spent. With VK's focus on maintaining and strengthening its social network position, adding features to the platform (most of which are still in the early development stage), we believe Mail.ru will be able to maintain its strong position in social networks.

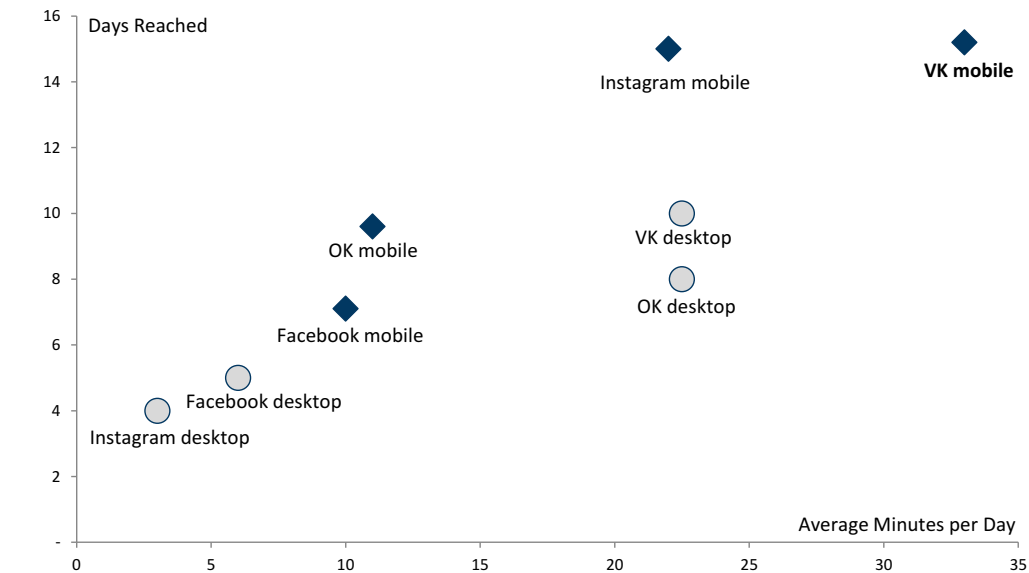
Exhibit 39: VK is the dominant social network in Russia; Instagram is a strong number 2, especially among younger users
Desktop & Mobile, Monthly Reach, %, September 2018



Russia 100k+ cities

Source: Mediascope

Exhibit 40: VK is the leading social network on days reached and time spent on mobile; Instagram has similar reach, but lower time spent and desktop presence
Social networks usage in Russia, September 2018



Russia 100k+ cities, 12-64 age

Source: Mediascope

E-Hailing: Can the online taxi business be profitable for Yandex and EBITDA margins reach the same level as online search?

We believe yes: Russian online Taxi market is profitable for Yandex (as of 3Q18), and we see room for margins to reach 50% levels.

The most frequent pushback we get on our Yandex investment view is our valuation for Yandex.Taxi. The key debate is that the online taxi business can not be profitable or that long-term margins will remain significantly below the level of the “core Search” business of 40-50%. In our view, one reason some investors are bearish on the Taxi market is the lack of disclosure for online ride-hailing businesses globally (all companies are private). We argue that, as the business scales, Yandex.Taxi should realise improved economics as Costs of Revenues (e.g. SMS, acquiring fees, etc.), Sales and Marketing, and General and Administrative costs decline as a percentage of sales. We also argue that many investors underestimate the entry barriers, which we believe minimises the risk of entrants and protracted cash burn: It is relatively easy to create a consumer-friendly app and gain share through offering drivers subsidies; but Yandex’s long-term competitive advantage, in our view, is the backend technology, which is highly complex, requiring demand prediction, surge pricing and navigation technologies (online taxi firms are effectively technology companies).

Below we show our base case Russian taxi market model and Yandex.Taxi forecasts, but now detail Yandex.Taxi P&L progression for reaching 50%+ EBITDA margins over time. Our assumptions are primarily based on the publicly disclosed segmental reporting for Yandex.Taxi and our assumptions on revenue and cost progression.

Exhibit 41: Russian taxi market model

Taxi market (total GMV), RUBbn	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	CAGR		Commentary
	2018E-2021E	2021E-2025E									
Total market, Rub bn	570	639	692	748	809	867	928	985	9.5%	7.1%	Total market GMV dynamics is driven by growth both in number of rides and average ticket (largely in-line with inflation)
growth, % yoy	12%	12%	8%	8%	8%	7%	7%	6%			
Rides, mn	3,352	3,688	3,835	3,989	4,148	4,273	4,401	4,489	6.0%	3.0%	
growth, % yoy	12%	10%	4%	4%	4%	3%	3%	2%			
Ticket, Rub/ride	170	173	180	188	195	203	211	219	3.3%	4.0%	
growth, % yoy	0%	2%	4%	4%	4%	4%	4%	4%			

Source: Goldman Sachs Global Investment Research

Exhibit 42: Yandex.Taxi: Revenue assumptions

Yandex. Taxi Revenue model	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	CAGR		Commentary
	2018E-2021E	2021E-2025E									
Russian Taxi market, Rub mn	569,913	639,442	691,621	748,057	809,098	866,706	928,415	984,863	9.5%	7.1%	Gross bookings to grow on the back of increasing online taxi penetration and Yandex.Taxi's share in online
Online share (penetration), %	42%	48%	53%	57%	61%	65%	69%	72%			
Yandex share in online, %	78%	81%	84%	85%	86%	87%	88%	89%			
Gross Bookings, Rub mn	186,683	250,014	306,120	362,699	425,970	491,664	563,708	627,557	24.8%	14.7%	
growth, % yoy	72%	34%	22%	18%	17%	15%	15%	11%			
Subsidies	(9,334)	(10,001)	(12,245)	(14,508)	(17,039)	(17,208)	(19,730)	(21,964)	15.8%	10.9%	Subsidies's level should be sustainable in the long term given the need to incentivize drivers and passengers
% of GMV	5%	4%	4%	4%	4%	4%	4%	4%			
Intermediaries	(5,600)	(6,250)	(7,653)	(9,067)	(10,649)	(12,292)	(11,274)	(12,551)	17.4%	8.5%	Intermediaries should gradually vanish in the long term on the back of higher expected number of officially self-employed workers
% of GMV	3%	3%	3%	3%	3%	3%	2%	2%			
Net Partner Earnings	(153,080)	(201,261)	(243,365)	(284,719)	(330,127)	(378,581)	(431,236)	(473,806)	23.0%	13.6%	Net Partner Earnings is driver's gross income (excludes Yandex's take rate as well as payment for software and VAT)
% of GMV	82%	81%	80%	79%	78%	77%	77%	76%			
effective take rate, %	10.0%	13.0%	14.0%	15.0%	16.0%	17.0%	18.0%	19.0%			Effective take rate is a commission charged by Yandex.Taxi, adjusted for Subsidies and payments to Intermediaries
Total Contra Revenue	(168,015)	(217,512)	(263,263)	(308,294)	(357,815)	(408,081)	(462,240)	(508,321)	22.4%	13.3%	
Net Revenue	18,668	32,502	42,857	54,405	68,155	83,583	101,467	119,236	42.8%	21.7%	
% growth yoy	282%	74%	32%	27%	25%	23%	21%	18%			
Yandex's share of total market GMV	33%	39%	44%	48%	53%	57%	61%	64%			We expect Yandex's market share to expand 31ppt over 2018E-2025E

Source: Goldman Sachs Global Investment Research

Exhibit 43: Our analysis suggests scope for Yandex.Taxi to reach c.50% long-term margins

Yandex.Taxi: Profit & Loss statement assumptions

Yandex. Taxi P&L	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	CAGR		Commentary
									2018E-2021E	2021E-2025E	
Net Revenue	18,668	32,502	42,857	54,405	68,155	83,583	101,467	119,236	42.8%	21.7%	
% growth yoy	282%	74%	32%	27%	25%	23%	21%	18%			
Cost of Revenue	(6,347)	(8,886)	(10,663)	(12,263)	(13,857)	(15,381)	(16,919)	(18,611)	24.5%	11.0%	May include SMS, acquiring fees, insurance, corporate segment cost of revenues and others
% growth yoy	40%	20%	15%	13%	11%	10%	10%	10%			
Gross Profit	12,321	23,616	32,193	42,142	54,298	68,202	84,548	100,625	50.7%	24.3%	
Operations and Support	(2,987)	(3,883)	(4,465)	(4,912)	(5,305)	(5,676)	(6,017)	(6,318)	18.0%	6.5%	Long term growth of costs on Operations and Supports is limited by scale effect from higher revenues/rides
% growth yoy	35%	15%	13%	12%	10%	10%	10%	8%			
Sales and Marketing	(6,534)	(8,821)	(10,144)	(11,361)	(12,724)	(14,251)	(15,962)	(17,558)	20.2%	11.5%	Sales and Marketing could remain a large cost item in the long term owing to the need of sustaining market share
% growth yoy	35%	15%	12%	12%	12%	12%	12%	10%			
Research and Development	(2,800)	(3,780)	(4,347)	(4,913)	(5,502)	(6,052)	(6,657)	(7,190)	20.6%	10.0%	Continuous investments into R&D are needed to maintain advanced level of Yandex's online platform
% growth yoy	35%	15%	13%	13%	12%	10%	10%	8%			
General and Administrative	(4,294)	(5,797)	(6,956)	(7,582)	(7,961)	(8,359)	(8,777)	(9,128)	20.9%	4.7%	Long term growth of General and Administrative Expenses is limited by scale effect from higher revenues/rides
% growth yoy	35%	20%	20%	9%	5%	5%	5%	4%			
Depreciation and Amortization	(933)	(1,120)	(1,344)	(1,613)	(1,936)	(2,323)	(2,787)	(3,345)	20.0%	20.0%	
Total Operating Expenses	(17,548)	(23,401)	(27,257)	(30,380)	(33,428)	(36,662)	(40,200)	(43,538)	20.1%	9.4%	
Adjusted EBIT	(5,227)	215	4,937	11,762	20,870	31,540	44,348	57,086			
Adjusted EBITDA	(4,294)	1,335	6,281	13,375	22,806	33,863	47,135	60,431			EBITDA margin to be driven by decreasing operating expenses and cost of revenues as % of Net Revenue. We expect long term profitability level at around 50%
EBITDA margin, %	-23%	4%	15%	25%	33%	41%	46%	51%			
Other Expense (Income), Net	0	0	0	0	0	0	0	0			
% of revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Net interest income	858	853	899	1,088	1,476	2,113	3,046	4,304			
Income tax expense	874	(214)	(1,167)	(2,570)	(4,469)	(6,731)	(9,479)	(12,278)			
% tax rate	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%			
Net Income	(3,495)	854	4,669	10,280	17,877	26,922	37,916	49,113			

Source: Goldman Sachs Global Investment Research

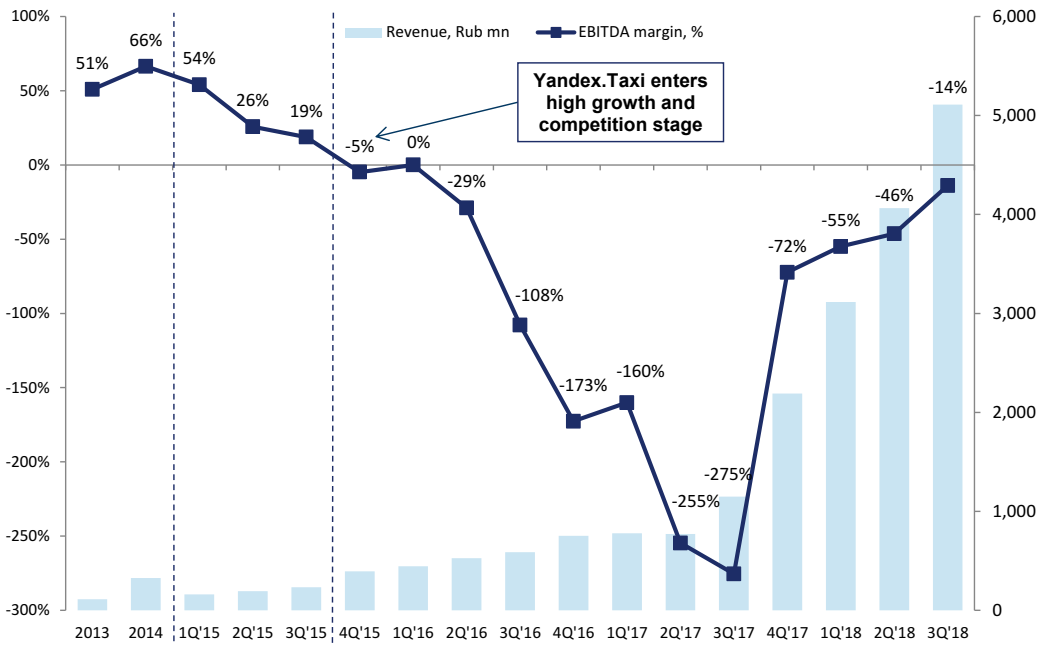
One driver for profitability improvement is the scope for increases in Yandex's take rate (i.e., application's commission), in our view. We see room for increases as drivers' economics get better (e.g. recent changes in self-employed individual regulation that would help eliminate intermediaries); continued improvement in car utilization (e.g. technological improvements that allow for faster and more effective order allocation); and scope for lower car maintenance costs (fuel discounts, car lease, car wash discounts).

In Exhibit 45, we lay out a scenario in which Yandex increases take rates without a negative effect on driver's net earnings. We note that most online taxi drivers (up to 80% according to industry participants with whom we spoke) use ride-hailing as secondary source of income, complimentary to their main employment (so primarily weekends, holidays, etc.) As such, we assume they would be less price sensitive to a potential take rate increase compared to permanent "professional" drivers. A challenge in Moscow specifically is attracting drivers given the low unemployment rate of 1%, but this should be less acute in regions with higher unemployment rates (and would suggest more flexibility on take rate increases in those regions).

Yandex's ride hailing business became profitable in Russia in 3Q18 following 11 quarters of losses

Yandex.Taxi's profitability trajectory is, in our view, an indication that the business could be profitable in the long run once growth saturation and dominance are achieved. Looking at Exhibit 44, we would note that Yandex.Taxi was profitable until 4Q15, when it saw a significant growth opportunity (which was realized by increasing subsidies) as well as faced competition.

Exhibit 44: Yandex.Taxi was profitable until it entered a high growth and competition phase
Yandex.Taxi EBITDA margin progression (LHS) vs. revenue, Rub mn (RHS)



Source: Company data

Exhibit 45: In our scenario, drivers' earnings would be unaffected despite a take rate increase

Professional taxi driver model in Moscow, Rub

Metrics	"Professional driver" model		Comments
Key assumptions	Current stance	Long-term stance	
No of rides per month	350	377 ↑	Higher number of rides is provided by higher utilization on the back of technological improvements and higher scale
Working days per month	24	24	
Average number of rides per day	14.6	15.7	
Required working hours per day	9.0	9.0	In general, Moscow riders tend to work extra hours to get additional earnings
Car utilization	65%	70%	Higher utilization releases wasted time from iddling and redistributes it to additional orders
Idling per each ride, min	12.9	10.3	Idling decreases on the back of higher car utilization assumption
ETA, min	5	5	We see little room to meaningfully decrease ETA in Moscow
Average waiting time, min	3	3	
Average time on the road, min	16	16	
Average time spent per ride (incl. idling + ETA + waiting), min	37	34	
Rides per hour capacity	1.6	1.7	
Driver's P&L	Current stance	Long-term stance	
Number of rides per month	350	377	
Average Fare per ride, Rub	400	400	Potentially higher fare per ride might also contribute to higher driver's income, which is not our base case
Gross revenue, Rub	140,000	150,789	
Yandex's subsidy	5%	3%	Yandex also has capacity to reduce subsidies without harmful effect on driver's income owing to higher car utilization
Fees to intermediary	5%	0%	Elimination of intermediaries in the Long-term stance is a key driver of Yandex's take rate increase
Take rate to Yandex	23%	28%	Includes Yandex take rate, payment for Yandex software and VAT
Effective driver's commission	23%	25%	Effective driver's commission increases by just 2% versus 5% for Yandex plus savings from less subsidies
Driver revenue per month	107,800	113,092	
Fuel expenses	19,523	20,017	Fuel expenses grow on the back of more time spent for implementing orders instead of idling
Car Lease (incl insurance)	33,600	33,600	
Car wash	2,000	2,000	
Personal income tax (broadly not taken)	0%	4%	Self-employed status implies tax rate of 4% on personal income
Net income per month	52,677	52,951	Driver's income remains broadly flat despite take rate increase
Moscow median net salary	48,200	48,200	

Assumptions are for Moscow driver

Source: Goldman Sachs Global Investment Research

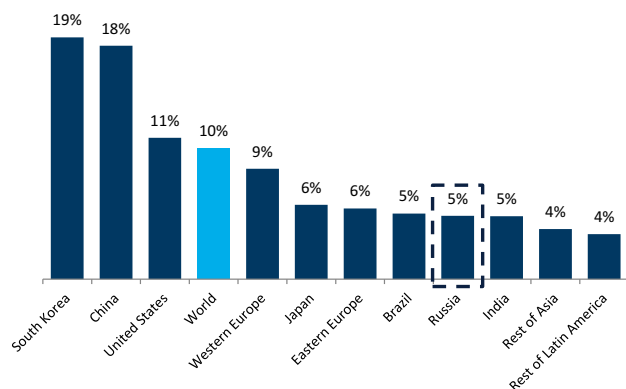
E-commerce: Who could be the long-term winners in Russian e-commerce and how much could it cost for the market leaders to get there?

This is the most challenging question of the three since the market is still in its relative infancy and faces a number of structural hurdles that will take time to resolve (poor fulfilment, cash-on-delivery, weak postal services, complicated customs rules and minimal supportive regulation). We believe there won't be a straightforward answer for the next few years as many public and private players have just started to accelerate investment. We also think that some investors may underestimate the magnitude of the investment required to become dominant players.

The Russian e-commerce market is highly underpenetrated (c.5% of total retail sales, 2x below global average, and just 3% excluding cross-border trade) and fragmented. The two market leaders have unique (for global e-commerce) business models: AliExpress (#1 by the share of GMV in Russia) is a cross-border supplier from China with a low ticket size and up to 2-3 weeks of delivery time. Yandex.Market (#2 share) operates under the traditional price comparison model as part of Russia's largest search engine. The site mainly re-directs users to merchants' own websites (it does not yet offer seamless payment, fulfilment or delivery). The rest of the competition has single digit share, being niche vertical players (e.g. Wildberries, DNS, Lamoda, Citilink, MVideo), cross-border platforms (e.g. Joom, Pandao) or still relatively small but fully-fledged e-commerce players (Ozon).

Exhibit 46: E-commerce penetration in Russia is significantly below global levels relative to overall internet penetration

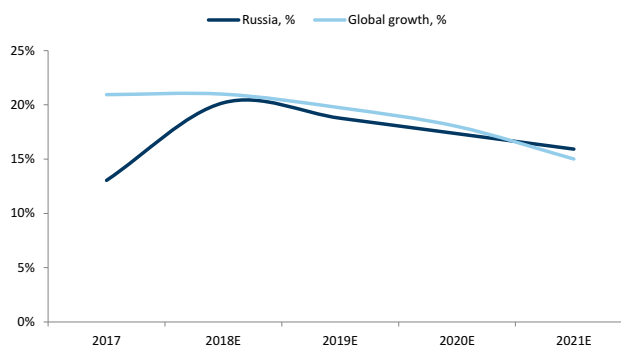
E-commerce penetration by country in 2017, %



Source: Company data, Census Bureau, Euromonitor, IBGE, IPCA, AKIT, METI, iResearch, NBS China, Goldman Sachs Global Investment Research

Exhibit 47: Our e-commerce growth forecasts for Russia are broadly in line with GS global e-commerce outlook

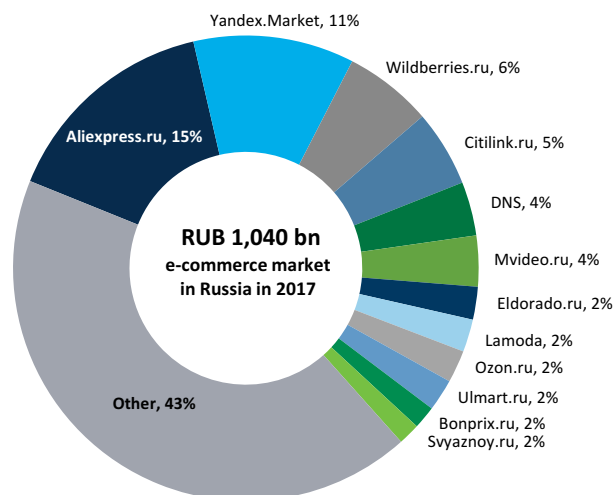
Russia and global e-commerce growth forecasts



Source: Company data, Census Bureau, Euromonitor, IBGE, IPCA, AKIT, METI, iResearch, NBS China, Goldman Sachs Global Investment Research

Exhibit 48: Russian e-commerce market is very fragmented

E-commerce market split by player, %



Source: Data Insight, Goldman Sachs Global Investment Research

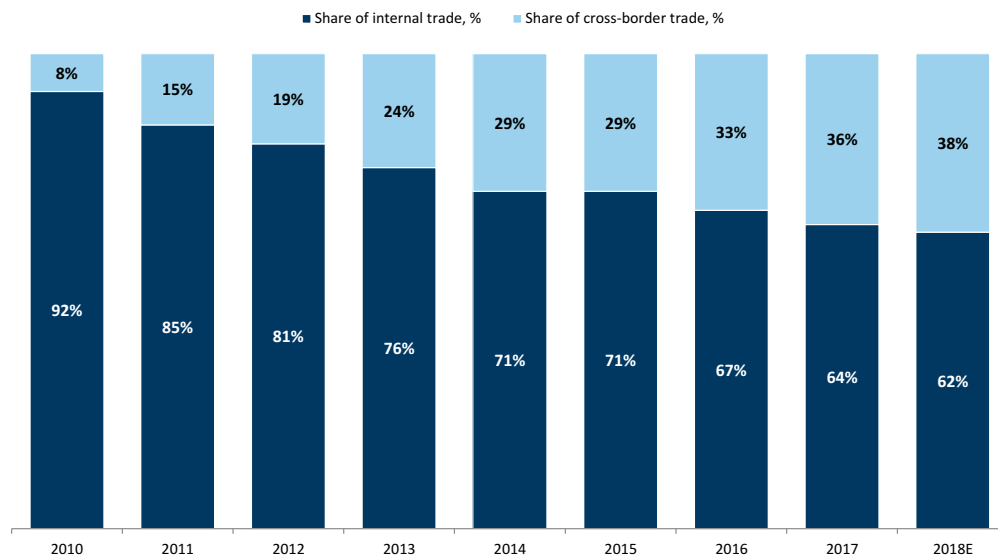
Over US\$1bn in planned e-commerce investments have been announced over the past 18 months

As highlighted in **Russia's Internet champions positioned to keep US giants at bay**, we believe Russian e-commerce will be the largest addressable market, attracting investment from domestic incumbents and potential newcomers. Several have raised funds over the last year (Yandex.Market and Ozon in particular). This, coupled with the announcement of AliExpress Russia JV (Alibaba, Mail.ru, RDIF and MegaFon) and Joom's expansion (cross-border application) indicates the focus on this market opportunity, which we expect to support accelerated growth. We are also starting to see offline players establish an online presence, such as in consumer electronics (e.g. M.Video) and food retail chains (e.g. Perekrestok, Azbuka Vkusa, VkusVill).

The key medium-term trends for e-commerce, in our view, are: 1) Market growth acceleration (GSe c.17% CAGR through 2030 vs. low teens growth in 2017); 2) Consolidation (as a fragmented market, it would suggest opportunity for roll up M&A and share gains by the better capitalised players); 3) Offline players moving online (to protect market share from pure play online retailers); 4) High focus on cross-border competition and continued dominance of cross-border (prices are typically more competitive and domestic e-commerce infrastructure is less developed). Still, we believe cross-border trade share will start to contract in the mid to long run on our view that domestic e-commerce accelerates on the back of higher investment and thus better user experience.

Exhibit 49: Share of cross-border trade has been growing over time, which we expect to revert in the long run

E-commerce split by internal vs. abroad trade, %



Source: AKIT, Goldman Sachs Global Investment Research

Today, the playing field is fairly level: most domestic e-commerce players hold similar low single digit share (if we exclude cross-border trade and price comparison for Yandex.Market). The differentiating factors required for success, in our view, are access to capital; technology; infrastructure; customer traffic and, importantly, management execution. Key players to watch, in our view, are Yandex.Market (with its Sberbank JV US\$500mn e-commerce commitment); Mail.ru (announced AliExpress Russia JV); and Ozon, Russia's largest online retailer.

Yandex.Market has advantages, in our view, with access to capital; technology and traffic synergies with Yandex and Sberbank as well as its price comparison business, which generates c.Rub2 bn annual EBITDA.

While we take no view on the transaction closing, **Mail.ru** (subject to completion of AliExpress Russia JV) could benefit from Mail.ru's social network traffic; Alibaba's cross-border platform and deep e-commerce knowledge; and, subject to deal terms, access to capital. We note that the management team is not yet formalized; local infrastructure is not developed and its lags in first-mover advantage vs strong vertical players like Ozon and even Yandex.Market.

Ozon has the most established infrastructure and deep e-commerce experience of the three. Its potential challenge is its reliance on external capital to fund continued investment in infrastructure and technology.

Several vertical players dominate in their respective niches: Fashion (Wildberries, Lamoda); Consumer electronics (MVideo, Citilink, DNS, Svyaznoy); and DIY (Vseinstrumenti.ru; Petrovich). In our view, many of them have a first-mover advantage,

local market knowledge, well known niche brand, potentially attractive supply terms (given decent GMV shares) and experienced management teams.

Becoming an e-commerce leader could be a long and costly process

It took Ozon several hundred million dollars (US) of investment to reach single digit share in a market with c.3% domestic e-commerce penetration. Although we believe a pure marketplace business model could be profitable and self funded, we think it could be challenging to compete with 1P players like Ozon (general e-commerce) or vertical speciality online retailers (e.g., Wildberries) given their market expertise and infrastructure (owned warehouses, logistics). We thus believe that the magnitude of investment required for the likes of Yandex.Market (transitioning into full scale e-commerce services) or the AliExpress Russia JV (currently a marketplace business model) to become dominant players could be underestimated.

We believe there wouldn't be a clear market leader over the next five years. Based on their current shares, we estimate for the top 3 players (based on MAUs) – Yandex.Market, Mail.ru and Ozon – to reach 50% combined market share in five years (by 2023E), they would have to realise an average revenue CAGR of >30% if we assume all other players grow at just 9%, in line with our market forecasts. On our estimates, this would still leave the market at relatively low e-commerce penetration of 9% and relatively fragmented compared to international standards.

Sector trends to watch in 2019 and beyond

Access to capital will increasingly matter — especially in fast growing competitive segments which require significant investment to get scale. Yandex is one of the few well capitalized domestic players and has limited exposure to capital market volatility (US\$1.4bn cash on the balance sheet, including US\$400mn at Taxi segment, as of 3Q18). Mail.ru holds about \$150mn cash (as of 3Q), and is subsidising cash-burning businesses like food delivery, classifieds and online taxi, while the AliExpress Russia JV could require a capital injection. Mail.ru management said on its 3Q results call that new strategic alliances, partnerships and capital structure alternatives, including the potential deconsolidation of its O2O business, are under consideration. While we take no view on the likelihood of a transaction occurring, these could potentially be avenues to attract additional capital for the development of its experimental projects.

Increased Government regulation and broader involvement in the sector as the internet takes a larger share of the offline world, following the global trend. In our view, the Government's interests are aligned with those of internet companies in, for example, legislation of self-employed individuals (bringing greater transparency to online taxi market) and in potentially allowing online sales of alcohol, jewellery and medicine (generating higher tax revenue and transparency). Higher adoption of online taxi services and car share is favourable for cities' traffic conditions as it reduces personal car ownership and thus improves congestion. That said, stricter regulation could lead to a higher cost of compliance.

Higher focus from Yandex and Mail.ru on cross-selling / subscription models of different products using big data and internal user analytics. As they continue to leverage their "ecosystem" models, we expect greater use of subscription models to drive greater customer engagement and loyalty. We would expect competition between the ecosystems to intensify. Although Yandex and Mail.ru already compete in a significant number of sub-segments, the magnitude of the cash burnt in the "ecosystem fight" is relatively small: for now Yandex is not disruptive to MAIL's key segments of social networks and gaming, while the competitive threat from MAIL's increased exposure to online taxi has not been highly visible for Yandex.Taxi. Further e-commerce investments (which we expect could be potentially substantial over time as the market evolves) could potentially be done with outside investors (both companies have deconsolidated their e-commerce businesses and have said they are not planning to inject extra capital beyond that already committed). Most recently, the two started competing in Food delivery and, to a lesser extent, in Taxi and Music.

Accelerating growth of domestic e-commerce, deceleration of cross-border trade.

Cross-border e-commerce in Russia accounts for 36% of the overall e-commerce market according to AKIT. While we believe there are structural reasons for this high share of cross-border trade, we see limits on this pace of growth in the long run. We are now seeing clear signs of increasing focus from local players to e-commerce, which in our view will bring significantly better user experiences and, in turn, attract consumers.

Offline players will increasingly focus online, which we are already seeing in transport (taxi), consumer electronics, food retail and telecom, among others. At the same time, we think they could face challenges in achieving returns comparable to their offline, core business against the well-funded technological leaders.

The internet sector itself will be a driver of advertising budget growth.

Internet-related advertising on TV grew triple digits in 2018 (2.5x yoy during 9M18 according to Vedomosti, October 3, 2018) and is already a top-10 advertising category on TV. More than a billion US\$ was invested in Russian e-commerce and e-Hailing over the last year, of which we would expect a portion to go towards marketing and TV advertising. We would also expect offline players to advertise their online products.

Fight for talent will intensify, putting pressure on employee cost inflation and is a potential risk to growth.

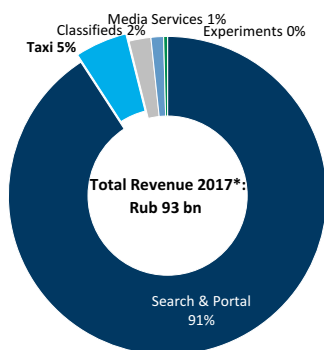
Russian internet sector revenues have been growing at 20%+ levels, while population growth in Russia is stagnating and working demographics are unfavourable (e.g., the number of people entering the work force for the first time is less than the number retiring). While the overall cost for tech talent is relatively lower in Russia than developed markets, we would expect cost inflation as the pool competing for talent expands (such as with entry of offline players).

Yandex: Unique exposure to the fastest growing ecosystem in Russia; Buy, on FL

Investment case. Yandex is our top pick in the Russian internet space (on the CEEMEA Focus List), offering the most potential price target upside in our coverage group. It is Russia's largest search engine, with a c.57% share: it operates the dominant e-hailing company, Yandex.Taxi; owns the leading classifieds autos brand in Moscow, Auto.ru; and operates Russia's largest e-commerce marketplace, Yandex.Market. We view Yandex as uniquely exposed to the Russian internet market as its platform combines ecosystems similar to that of Google and Amazon. Yandex is constantly adding new businesses and entering new sub-segments, and has expanded into car sharing, foodtech, voice assistant technology (including hardware device), premium subscription service, cloud and services marketplace in less than a year. We expect market share growth across segments in the medium term as well as the continued growth of its addressable markets. We believe some investors are not convinced of Yandex Taxi - which we see as the key longer-term topline growth driver - profitability prospects, though we note it reached profitability in 3Q18, which is supportive for confidence in the business model, in our view.

Exhibit 50: Although Taxi was not a large source of revenue for YNDX in 2017...

Yandex 2017 revenue split by category, %

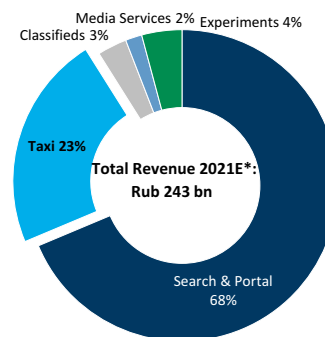


* Excl. Eliminations and E-commerce revenues

Source: Company data

Exhibit 51: ...we expect it to increase c.18ppts as a share of revenue in the next four years and to be the key top-line growth driver

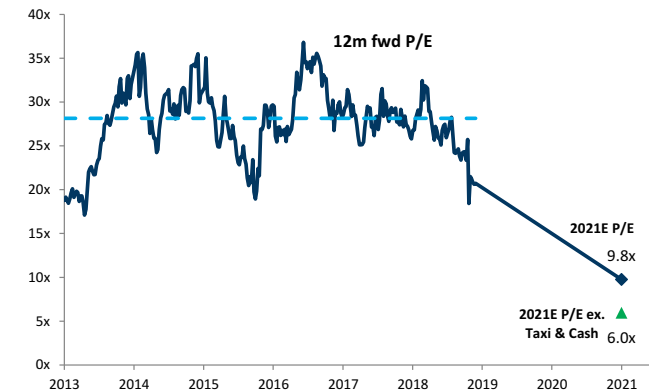
Yandex 2021E revenue split by category, %



Excl. Eliminations

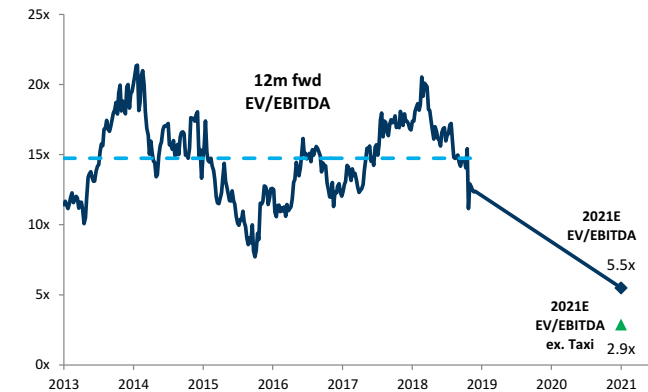
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 52: Yandex trades at a 26% discount to its historical 5yr median 12m fwd P/E...
12 month forward P/E



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 53: ...and at a 16% discount on 12m fwd EV/EBITDA
12 month forward EV/EBITDA



Source: FactSet, Goldman Sachs Global Investment Research

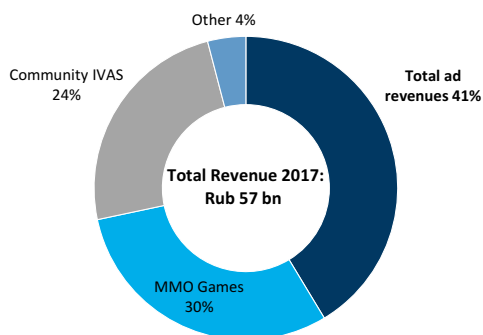
Mail.ru: Key beneficiary of social networks growth; Buy

Investment case. Mail.ru is Russia's second largest Internet platform by market capitalization and scale of business. Mail.ru initially emerged as an internet portal, which combined the second- and third-largest social networking sites in Russia; the leading instant messaging services, gaming and internet value-added services platform (IVAS); and the dominant email service (after which it is named). Mail.ru has been very active in M&A since its IPO in 2010, acquiring: Russia's most popular social network, VK; leading food delivery services, Delivery Club and ZakaZaka; gaming business, Pixonic; auto classified, Am.ru; and the market leader in the Russian e-Sports industry, ESForce Holding. Mail.ru has developed the successful Youla general classifieds project with more than 25mn active monthly users in less than two years and is now in the active monetisation stage.

We believe ownership of the two highly popular social network sites in Russia – VK and OK – is the key to Mail.ru's success. Mail.ru leverages significant traffic on its social networks to promote other businesses (including games, classifieds and food delivery). We think this business model could effectively be replicated across other existing and emergent internet sub-segments, potentially leading to sizeable monetization opportunities. Moreover, the recently announced e-commerce JV with Alibaba, MegaFon and RDIF could potentially create long-term value, in our view, given access to funding and high potential synergies. While we take no view on the likelihood of a transaction occurring, a potential deconsolidation of O2O business (classifieds, food tech), which management said is one of many options under consideration, could potentially realise value in these cash-burning businesses and provide extra capital for their development.

Exhibit 54: Mail.ru has diversified revenue streams...

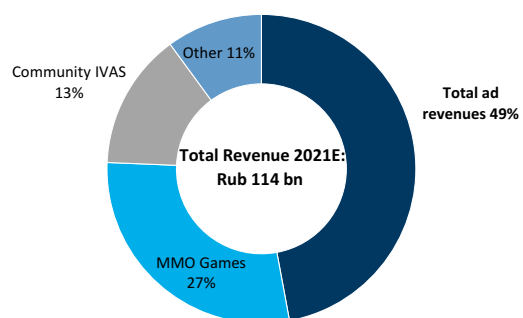
Mail.ru 2017 revenues split by category, %



Source: Company data

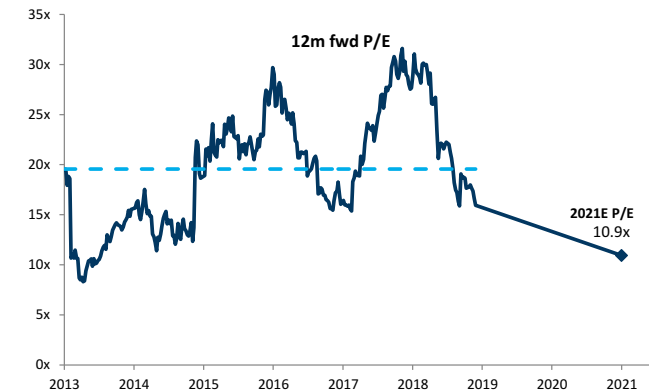
Exhibit 55: ...which we expect to shift more towards advertising revenues going forward, supported by strong social networks growth

Mail.ru 2021E revenues split by category, %



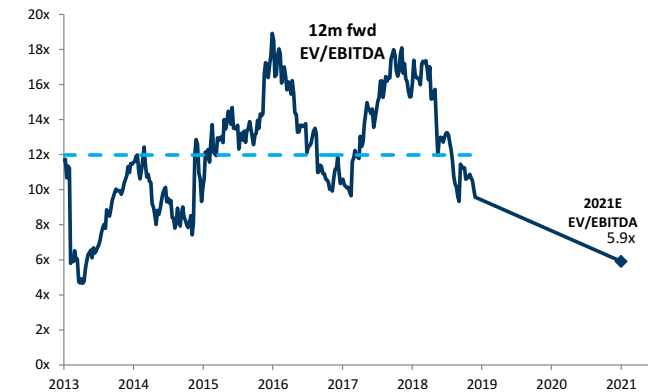
Source: Goldman Sachs Global Investment Research

Exhibit 56: MAIL trades at a c.19% discount to its historical 5yr median 12m fwd P/E...
12 month forward P/E



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 57: ...and at a 20% discount on 12m fwd EV/EBITDA
12 month forward EV/EBITDA



Source: FactSet, Goldman Sachs Global Investment Research

Valuation and risks

Yandex: Valuation methodology

We are Buy-rated on Yandex with 72% upside potential to our 12-month price target of US\$49.2 the stock is on our CEEMEA Focus List.

We use a SOTP valuation for Yandex, and value the core search business at 23x 2019E P/E, based on its global internet peers' average PEG of 1.2x, adjusted for Yandex's ex-taxi growth. This represents c.68% of the company's value. We use a DCF approach to value Yandex's stake in the taxi segment (Rub227bn EV), which accounts for c.21% of the company's value. We also use the DCF approach to value the company's stake in Yandex.Market (Rub28bn).

Yandex: Key risks

Macro. Deterioration in the macro environment in Russia could adversely affect Yandex's operational results, as the company's advertising customers could allocate less to their marketing budgets. This would weigh on Yandex's revenue-generation capability.

M&A/execution. While Yandex has not highlighted M&A as a pillar of its strategy, we see this as a risk for internet companies in general.

Tougher competition in mobile/taxis. Intensifying competition in mobile/taxis could negatively affect Yandex's operating performance.

Regulation. The evolving regulatory environment creates additional risks for all internet companies, including Yandex.

Inflated distribution/marketing costs. Increasing distribution or marketing costs could weigh on Yandex's EBITDA margin and adversely affect the company's operational result.

Reassessment of the Russian market opportunity by global majors. More focus on Russia from Facebook, Google, or the potential entrance of new players (like Amazon) could challenge Yandex's dominance in its respective sub-segments.

Creation of new disruptive technologies with late/no response by Russian companies could be a threat for the existing business models.

Mail.Ru: Valuation methodology

We are Buy-rated on Mail.ru, with 56% upside potential to our price target. Our 12-month 22x 2019E P/E-based price target is US\$36. Our target multiple is based on global internet peers' average PEG of 1.2x, adjusted for MAIL's EPS growth.

Mail.Ru: Key risks

Macro. Deterioration in the macro environment in Russia could adversely affect Mail.ru's operational results.

M&A/execution. M&A is an important pillar of our Mail.ru investment case. The company has a proven track record of successful transactions (e.g., VK, Delivery club, Pixonic). Still, we would note the potential for M&A execution risks.

Regulation. The evolving regulatory environment creates additional risks for all internet companies, including Mail.ru.

Inflated marketing expenses. Increasing marketing/product development costs could weigh on Mail.ru's profitability for a prolonged period of time.

Creation of new disruptive technologies with late/no response by Mail.ru could be a threat to the existing business model.

Delayed execution of the Digital Strategy in Russia and unfavourable internet ecosystem conditions in general.

Global Internet valuation summary

Exhibit 58: Global Internet valuation summary

Close prices as of 6 December 2018

6-Dec-18 Global Internet Valuation Table																						
Share price is based on last close price																						
Company	Rating	Price currency	Share price	12m Target price	Upside	Mkt cap US\$m	P/E			EV/EBITDA			CAGR 'C17-'20E			Absolute performance			Relative performance			
							2018E	2019E	2020E	2018E	2019E	2020E	EPS	EBITDA	Revenue	1W	1M	12M	1W	1M	12M	
Yandex NV	Buy	USD	28.60	49.20	72%	9,617	24.6x	20.0x	14.7x	16.2x	12.1x	8.7x	46%	37%	28%	-2%	-5%	-12%	-1%	-1%	-2%	
Mail.ru Group	Buy	USD	23.08	36.00	56%	5,052	25.5x	15.7x	12.1x	14.1x	9.5x	7.0x	26%	25%	21%	-9%	-15%	-21%	-8%	-11%	-11%	
EMEA average					40%		36.8x	26.5x	27.6x	23.1x	18.8x	14.6x	24%	31%	14%	-6%	-10%	-12%	-3%	-4%	1%	
Global average					37%		35.6x	28.6x	23.8x	19.9x	15.8x	14.1x	27%	23%	18%	-2%	-4%	-8%	0%	-1%	-1%	
EMEA																						
Yandex NV	Buy	USD	28.60	49.20	72%	9,617	24.6x	20.0x	14.7x	16.2x	12.1x	8.7x	46%	37%	28%	-2%	-5%	-12%	-1%	-1%	-2%	
Naspers Ltd.	Buy	ZAR	2,755.00	4134.00	50%	84,425	26.5x	18.9x	13.8x	76.8x	53.8x	39.9x	39%	47%	13%	-6%	-5%	-24%	-5%	-1%	-13%	
Rightmove Plc	Sell	GBP	443.85	428.00	-4%	4,981	23.9x	22.2x	19.5x	18.9x	17.6x	15.8x	9%	8%	8%	-2%	-4%	1%	2%	3%	16%	
Auto Trader Group	Neutral	GBP	418.10	428.00	2%	5,172	21.3x	20.3x	18.3x	16.6x	15.8x	14.3x	8%	7%	6%	-4%	-4%	18%	-1%	3%	32%	
Axel Springer AG	Buy	EUR	53.00	77.50	46%	5,943	17.9x	15.3x	13.6x	9.1x	8.0x	7.4x	15%	12%	13%	-1%	-6%	-9%	-25%	-2%	-11%	
Scout24 AG	Neutral	EUR	36.80	42.60	16%	4,507	22.0x	20.1x	17.8x	14.8x	13.4x	11.8x	14%	13%	13%	0%	4%	4%	4%	11%	18%	
Schibsted ASA	Buy	NOK	288.00	372.00	29%	8,055	41.7x	31.7x	24.1x	20.2x	16.6x	13.1x	47%	24%	7%	-6%	-8%	22%	-3%	-1%	36%	
Mail.ru Group	Buy	USD	23.08	36.00	56%	5,052	25.5x	15.7x	12.1x	14.1x	9.5x	7.0x	26%	25%	21%	-9%	-15%	-21%	-8%	-11%	-11%	
ASOS Plc	Buy	GBP	4,615.00	7900.00	71%	4,921	42.3x	37.0x	29.9x	21.6x	17.9x	13.6x	22%	28%	24%	-8%	-16%	-26%	-4%	-9%	-12%	
JUST EAT	Buy	GBP	535.00	1060.00	98%	4,645	29.3x	23.6x	16.5x	18.4x	14.3x	9.2x	22%	31%	31%	-11%	-15%	-36%	-7%	-9%	-22%	
Zalando SE	Neutral	EUR	25.45	37.00	45%	7,090	129.5x	66.2x	41.1x	27.6x	19.1x	13.3x	17%	19%	20%	-11%	-19%	-44%	-8%	-12%	-30%	
Trivago N.V.	Neutral	USD	5.76	5.70	-1%	2,083			109.5x	27.5x	20.7x		127%		0%	-11%	-23%	-13%	-7%	-16%	1%	
Average					40%		36.8x	26.5x	27.6x	23.1x	18.8x	14.6x	24%	31%	14%	-6%	-10%	-12%	-3%	-4%	1%	
Americas																						
eBay Inc.	Buy	USD	29.47	34.00	15%	28,978	11.3x	16.1x	14.3x	7.8x	6.6x	5.4x	9%	6%	7%	0%	-2%	-20%	2%	3%	-22%	
Amazon.com Inc.	Buy	USD	1699.19	2200.00	29%	855,773	86.4x	67.2x	45.3x	25.7x	21.0x	16.5x	84%	36%	24%	2%	3%	47%	4%	8%	45%	
Expedia Group	Neutral	USD	120.65	125.00	4%	18,725	40.4x	26.6x	22.1x	9.8x	8.0x	6.1x	30%	13%	10%	1%	-4%	1%	3%	1%	-1%	
Facebook Inc.	Buy	USD	139.63	195.00	40%	409,116	18.8x	17.7x	15.8x	12.4x	10.4x	8.5x	17%	20%	28%	1%	-7%	-21%	3%	-3%	-23%	
Snap Inc.	Buy	USD	5.97	10.00	68%	9,125						66.9x			46%	-7%	-16%	-59%	-4%	-12%	-61%	
Netflix Inc.	Buy	USD	282.88	480.00	70%	131,322	106.8x	64.3x	42.0x	64.7x	42.1x	28.8x	79%	66%	29%	-2%	-9%	53%	0%	-5%	50%	
Pandora Media Inc.	Neutral	USD	8.77	10.00	14%	2,535						58.4x			12%	-1%	-3%	82%	1%	1%	80%	
PayPal Holdings	Buy	USD	85.82	94.00	10%	104,347	50.9x	38.7x	31.1x	23.0x	18.7x	14.8x	23%	20%	19%	2%	1%	17%	4%	5%	15%	
TripAdvisor Inc.	Sell	USD	63.88	52.00	-19%	9,288	73.6x	61.0x	53.6x	19.7x	17.1x	15.0x			6%	1%	12%	86%	3%	16%	83%	
Twitter Inc.	Buy	USD	32.96	43.00	30%	26,191	23.9x	65.1x	42.9x	19.0x	15.5x	12.6x			27%	21%	5%	-4%	56%	8%	0%	
Blue Apron Holdings	Neutral	USD	1.10	1.30	18%	227						7.3x			-9%	-8%	-17%	-71%	-5%	-13%	-73%	
Alphabet Inc.	Buy	USD	1078.08	1300.00	21%	760,132	25.4x	22.2x	18.3x	18.0x	12.6x	9.9x	49%	22%	22%	-2%	1%	4%	1%	5%	2%	
Zillow Group	Neutral	USD	36.65	33.00	-10%	7,947				31.1x	29.8x	24.5x		6%	39%	1%	-10%	-10%	3%	-6%	-12%	
GrubHub Inc.	Buy	USD	81.41	130.00	60%	7,678	80.9x	51.6x	33.9x	29.7x	19.7x	14.0x	44%	38%	39%	2%	-11%	19%	4%	-7%	17%	
Dropbox Inc.	Neutral	USD	22.42	31.00	38%	10,495	58.0x	47.3x	37.7x	22.1x	21.2x	16.9x		0%	0%	0%	-8%	-7%		-8%	-7%	
Spotify Technology S.A.	Buy	USD	136.83	200.00	46%	26,617							0%	0%	0%	0%	-2%	-4%		-2%	-4%	
Average					27%		52.4x	43.4x	32.5x	23.6x	18.9x	20.4x	34%	21%	18%	-1%	-5%	8%	1%	-1%	6%	
Asia																						
58.com Inc.	Neutral	USD	59.71	48.00	-20%	8,644	25.0x	17.7x		14.6x	10.2x					4%	-10%	-13%	6%	-10%	0%	
Tencent Holdings	Buy	HKD	310.60	397.00	28%	380,465	32.5x	24.8x	19.2x	19.3x	16.4x	12.6x	28%	18%	33%	0%	6%	-18%	1%	7%	-5%	
JD.com Inc.	Buy	USD	21.23	42.00	98%	31,349	81.1x	35.2x	18.9x	27.2x	18.4x	9.3x	32%	32%	24%	1%	-10%	-44%	3%	-10%	-31%	
Alibaba Group	Buy	USD	155.83	234.00	50%	409,521	27.7x	23.6x	16.1x	22.6x	18.2x	11.7x	32%	31%	48%	0%	6%	-10%	1%	6%	3%	
Ctrip.com International	Buy	USD	28.98	47.00	62%	18,424	23.2x	26.9x	14.2x	26.4x	23.4x	13.1x	30%	21%	19%	3%	-14%	-36%	5%	-13%	-23%	
NetEase Inc.	Buy	USD	238.47	307.00	29%	31,557	24.6x	23.3x	20.5x	14.3x	13.6x	11.2x	-6%	-3%	23%	7%	4%	-25%	9%	5%	-13%	
SINA Corp.	Neutral	USD	64.32	84.00	31%	4,731	22.2x	13.4x	10.9x	5.1x	3.2x	2.6x	33%	30%	29%	3%	-2%	-33%	4%	-2%	-20%	
Vipshop Holdings	Neutral	USD	5.25	7.20	37%	3,510	9.2x	8.6x	7.1x	3.6x	3.6x	2.5x	8%	4%	10%	-5%	-6%	-36%	-3%	-5%	-23%	
Weibo Corp.	Neutral	USD	62.58	78.00	25%	14,567	25.2x	20.2x	16.2x	19.7x	14.5x	10.7x	32%	34%	35%	5%	-4%	-36%	6%	-3%	-24%	
Gridsum	Buy	USD	4.10	19.40	373%	123	8.4x	2.9x								-2%	-25%	-51%	0%	-25%	-39%	
Baidu.com Inc.	Buy	USD	180.70	270.00	49%	63,786	17.3x	14.0x	11.3x	10.6x	8.0x	5.7x	23%	27%	20%	-1%	-6%	-22%	0%	-6%	-9%	
Info Edge India Ltd.	Buy	INR	1512.65	1900.00	26%	2,600	63.8x	57.9x	45.6x	50.7x	43.1x	32.7x	18%	21%	16%	-4%	12%	12%	0%	9%	20%	
Sea Ltd.	Buy	USD	12.44	20.00	61%	5,329							0%	0%	0%	0%	-4%	-2%	3%	-4%	3%	
Sogou Inc.	Buy	USD	6.10	8.30	36%	1,921	22.7x	18.0x	11.8x	11.1x	7.3x	4.0x	0%	0%	0%	0%	-1%	-3%	-47%	-1%	-3%	-47%
Meituan Dianping	Buy	HKD	54.00	82.00	52%	41,508				24.8x	146.6x	14.1x			61%	3%	-13%		3%	-13%		
Pinduoduo Inc.	Buy	USD	22.54	31.90	42%	20,726				15.3x		11.2x	0%	0%	0%	0%	15%					
Xiaomi Corp.	Buy	HKD	13.64	24.00	76%	42,534	28.6x	15.2x	10.3x	107.0x	11.4x	7.4x	0%	0%	0%	-4%	3%		-4%	3%		
Huya Inc.	Buy	USD	15.23	28.00	84%	3,377	59.0x	29.1x	16.5x	58.6x	17.8x	9.2x	0%	0%	0%	-11%	-21%		-11%	-21%		
iQIYI Inc.	Neutral	USD	19.84	27.00	36%	14,232				147.7x	10.9x	6.9x	0%	0%	0%	3%	-8%		3%	-8%		
Average					62%		31.4x	22.1x	25.4x	26.8x	22.6x	10.2x	14%	13%	19%	0%	-4%	-25%	1%	-5%	-15%	
Australia & Pacific																						
REA Group	Buy	AUD	75.24	97.70	30%	7,150	31.2x	27.3x	23.0x	18.0x	15.7x	13.4x	19%	17%	13%	-2%	3%	-7%	-1%	8%	2%	
SEEK	Neutral	AUD	17.10	17.60	3%	4,245	28.8x	27.6x	24.3x	16.1x	15.2x	13.8x	7%	10%	15%	-9%	-4%	-12%	-7%	1%	-3%	
Carsales.Com	Neutral	AUD	11.31	14.40	27%	1,967	19.6x	18.7x	17.0x	13.7x	12.7x	11.6x	10%	11%	13%	-6%	-6%	-27%	-5%	-1%	-18%	
News Corp.	Buy	AUD	17.83	24.10	35%	7,495	28.1x	28.7x	28.1x	9.7x	8.2x	7.5x	5%	13%	7%	-5%	-5%	-22%	-3%	1%	-13%	
Fairfax Media	Neutral	AUD	0.66	0.75	14%	1,095	13.0x	14.5x	13.8x	9.7x	9.8x	9.0x	-6%	1%	-2%	-1%	5%	-10%	0%	10%	-1%	
NCSOFT Corp.	Buy	KRW	488500.00	620000.00	27%	9,285	22.7x	16.9x	8.2x	15.0x	11.6x	5.1x	42%	40%	25%	-5%	9%	4%	-2%	11%	12%	
LINE Corp.	Neutral	JPY	3915.00	3600.00	-8%	8,366				66.2x	24.1x	15.8x	68%	33%	20%	-3%	11%	-20%	-1%	13%	-11%	
CyberAgent	Buy	JPY	5080.00	6700.00	32%	5,360	81.0x	34.0x	17.2x	13.5x	10.4x	7.4x	107%	22%	12%	0%	0%	31%	2%	1%	39%	
Kakaku.com	Sell	JPY	2258.00	1450.00	-36%	4,168	27.1x	26.1x	25.3x	17.7x	16.2x	15.5x	6%	10%	8%	0%	8%	27%	2%	10%	36%	
Rakuten	Neutral	JPY	892.00	860.00	-4%	10,465	9.3x	25.7x	23.5x	6.2x	8.7x	7.7x	-23%	-2%	13%	-1%	2%	-19%	1%	4%	-11%	
Yahoo Japan	Buy	JPY	317.00	530.00	67%	14,340	15.0x	13.8x	11.2x	5.7x	4.8x	3.9x	3%	7%	8%	-1%	-3%	-37%	1%	-1%	-29%	
Average					17%		22.6x	26.9x	19.6x	16.1x	12.1x	9.6x	22%	15%	12%	-3%	3%	-11%	-1%	6%	-2%	

GS Internet Research around the world

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[Rethinking Mobility: The 'pay-as-you-go' car: Ride hailing just the start \(May 23, 2017\)](#)

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[Alphabet Inc. \(GOOGL\): With ads in one hand, what's in Google's "other" \(September 28, 2018\)](#)

Other:

[Venture Capital Horizons: Exploring China's Ecosystems \(August 22, 2018\)](#)

[Extended Reality: Updating our VR/AR thesis as platform strategies democratize innovation \(January 28, 2018\)](#)

[Emerging Ecosystems: The 'Outsiders' Volume 2.0 \(December 6, 2017\)](#)

Initiation of coverage: Asian Internet

Meituan Dianping (3690.HK): Take out, dining, travel & more, all at your fingertips; initiate at Buy (October 24, 2018)

Pinduoduo Inc. (PDD): Transforming from unicorn to ubiquitous; initiate with Buy (September 13, 2018)

Info Edge India Ltd. (INED.BO): Jobs, houses, food and more; initiate with Buy (August 13, 2018)

Huya Inc. (HUYA): eSport comes of age but valuation full; initiate at Neutral (August 3, 2018)

iQIYI Inc. (IQ): Short-term volatility; long-term opportunity; initiate at Buy (May 8, 2018)

Sogou Inc. (SOGO): Search engine with a WeChat option; initiate with Buy (December 4, 2017)

Sea Ltd. (SE): One-click stop to play, buy, and pay in Southeast Asia; initiate at Buy (November 14, 2017)

Initiation of coverage: American Internet

Spotify Technology S.A. (SPOT): Leading the global music revolution; initiate at Buy (April 30, 2018)

Dropbox Inc. (DBX): Initiating on Market Leader at Neutral (April 17, 2018)

Appendix: Yandex and Mail.ru key assumptions and financial forecasts

Yandex: Key assumptions and financial forecasts

Exhibit 59: Strong topline and margin increases, coupled with stable capex intensity, to drive FCF boost

Yandex: Key financials

Key financials, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	CAGR 2015-17 2017-22E	Commentary
Revenue	59.8	75.9	94.1	126.4	162.6	197.1	233.8	276.0	25% 24%	Strong growth across all operational segments coupled with...
EBITDA	20.8	26.1	29.1	39.9	56.2	74.0	94.3	116.8	18% 32%	...monetisation-driven margins expansion translate to solid EBITDA growth...
CAPEX	13.0	9.6	12.4	19.0	22.8	25.6	28.1	30.4	-3% 20%	...which combined with stable capex intensity...
FCF	6.5	15.8	11.4	7.2	21.4	37.3	54.7	62.8	32% 41%	...support solid FCF generation growth for Yandex

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 60: Search and taxi: Key earnings drivers for Yandex

Revenue and EBITDA by segment for Yandex

Revenue & EBITDA by segment, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	Commentary
Search & Portal	55.9	69.3	84.2	103.8	123.5	144.5	166.9	191.9	We expect solid growth in Search & Portal segment supported by strong ongoing trends in digital advertising market in Russia
yoy growth, %	16.7%	24.0%	21.5%	23.3%	19.0%	17.0%	15.5%	15.0%	
eCommerce	3.4	4.7	5.0	1.7					E-commerce was deconsolidated post deal closure with Sberbank from April 27, 2018
yoy growth, %	17.7%	38.8%	5.3%	n/a					
Taxi	1.0	2.3	4.9	18.7	32.3	43.1	54.4	67.9	Taxi will be the highest growing segment in the coming years, in our view
yoy growth, %	200.9%	135.1%	111.5%	281.7%	73.1%	33.4%	26.1%	24.9%	
Classifieds	0.9	1.3	2.1	3.8	5.0	6.2	7.4	8.5	We expect strong growth in classifieds in the coming years, however, do not assume it to comprise significant share of YNDX revenue in the future
yoy growth, %	65.9%	42.1%	62.1%	85.0%	30.0%	25.0%	20.0%	15.0%	
Media Services		0.6	1.2	1.8	2.7	3.5	4.2	5.0	Media Services should also enjoy significant growth, but we currently do not observe much potential for them to become a large revenue source for YNDX
yoy growth, %			82.9%	50.0%	50.0%	30.0%	20.0%	20.0%	
Experiments	0.4	0.1	0.4	2.4	6.0	7.8	10.1	13.2	Experiments might potentially bring significant upside potential for revenues subject to execution
yoy growth, %	30.9%	n/a	398.6%	550.0%	150.0%	30.0%	30.0%	30.0%	
Eliminations	-1.8	-2.4	-3.6	-5.7	-6.8	-7.9	-9.2	-10.6	
Total revenue	59.8	75.9	94.1	126.4	162.6	197.1	233.8	276.0	
yoy growth, %	17.8%	27.0%	23.9%	34.4%	28.6%	21.2%	18.6%	18.0%	
Search & Portal	21.7	27.8	36.6	47.8	57.4	67.9	79.3	92.1	
margin, %	38.7%	40.1%	43.5%	46.1%	46.5%	47.0%	47.5%	48.0%	
eCommerce	1.7	1.4	1.6	-0.3					
margin, %	50.8%	30.1%	32.2%	-15.5%					
Taxi	0.2	-2.1	-8.0	-4.3	1.3	6.5	13.6	22.4	On our estimates, taxi business will breakeven in 2019-20E
margin, %	16.5%	-90.2%	-162.8%	-23.0%	4.0%	15.0%	25.0%	33.0%	
Classifieds	0.1	-0.1	0.1	-0.1	1.0	2.5	3.7	4.3	
margin, %	16.3%	-5.7%	4.7%	-2.0%	20.0%	40.0%	50.0%	50.0%	
Media Services		-0.4	-0.4	-0.9	-0.5	0.0	0.4	1.2	
margin, %		-57.3%	-37.4%	-50.0%	-20.0%	0.0%	10.0%	25.0%	
Experiments	-2.7	-0.6	-0.8	-2.4	-3.0	-2.8	-2.7	-3.3	
margin, %	-615.9%	-793.2%	-228.5%	-100.0%	-50.0%	-36.0%	-27.0%	-25.0%	
Eliminations	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total EBITDA	20.8	26.1	29.1	39.9	56.2	74.0	94.3	116.8	Monetisation will drive margins across the majority of key segments
margin, %	34.8%	34.4%	30.9%	31.6%	34.5%	37.6%	40.3%	42.3%	

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 61: We expect c.40% EPS CAGR over the next 5 years on the back of revenue and margin expansion

Key P&L forecasts for Yandex

Income statement, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	CAGR 2015-17 2017-22E	Commentary
Revenue	59.8	75.9	94.1	126.4	162.6	197.1	233.8	276.0	25.4% 24.0%	Topline dynamics is driven mainly by growth in Taxi, Search and Experiments
yoy growth, %	17.8%	27.0%	23.9%	34.4%	28.6%	21.2%	18.6%	18.0%		
Operating cost	-38.9	-49.8	-65.0	-86.5	-106.5	-123.1	-139.5	-159.2	29.2% 19.6%	
yoy growth, %	31.0%	27.9%	30.5%	33.1%	23.1%	15.6%	13.4%	14.1%		
SBC	-2.9	-3.4	-4.2	-6.9	-7.6	-8.4	-9.2	-10.1		
yoy growth, %	135.2%	18.6%	22.5%	65.0%	10.0%	10.0%	10.0%	10.0%		
EBITDA	18.0	22.7	24.9	33.0	48.6	65.7	85.0	106.6	17.7% 33.8%	Monetisation will drive margins across the majority of key segments
margin, %	30.0%	29.9%	26.5%	26.1%	29.9%	33.3%	36.4%	38.6%		
EBITDA (SBC-adjusted)	20.8	26.1	29.1	39.9	56.2	74.0	94.3	116.8	18.1% 32.1%	
margin, %	34.9%	34.4%	30.9%	31.6%	34.5%	37.6%	40.3%	42.3%		
D&A	-7.8	-9.6	-11.2	-12.2	-15.4	-18.6	-21.6	-24.3		
as % of sales	13.0%	12.7%	11.9%	9.6%	9.4%	9.4%	9.2%	8.8%		
EBIT	10.2	13.1	13.6	20.8	33.2	47.1	63.5	82.3	15.8% 43.3%	
margin, %	17.0%	17.2%	14.5%	16.5%	20.4%	23.9%	27.2%	29.8%		
EBIT (SBC-adjusted)	13.1	16.5	17.8	27.8	40.8	55.5	72.7	92.4	16.9% 39.0%	
margin, %	21.8%	21.8%	19.0%	22.0%	25.1%	28.1%	31.1%	33.5%		
Net interest expenses	1.7	1.7	2.0	2.3	2.9	3.8	5.3	7.3		
Other gains and losses	1.7	-3.4	-1.5	31.3	-0.8	-0.6	0.0	0.3		
Taxes	-3.9	-4.3	-4.9	-8.7	-10.5	-14.2	-18.7	-23.9		
tax rate, %	23.8%	29.3%	26.8%	29.0%	24.0%	24.0%	24.0%	24.0%		
Other adjustments	-1.2	2.1	0.9	-28.2	0.0	0.0	0.0	0.0		Rub 28bn adjustment for gain from Yandex.Market deconsolidation in 2018
Net Income (SBC-adjusted)	11.4	12.5	14.4	24.5	32.4	44.5	59.3	76.1	12.5% 39.5%	Net income will be supported by strong operational performance and improving net cash position
margin, %	19.0%	16.5%	15.3%	19.4%	19.9%	22.6%	25.4%	27.6%		

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 62: We expect significant cash accumulation in the medium term, providing optionality for M&A / shareholder remuneration

Key balance sheet forecasts for Yandex

Balance Sheet, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	Commentary
PPE	24.3	18.8	21.2	29.3	37.7	45.4	52.4	58.9	
Intangible assets	2.5	5.5	5.0	3.7	2.7	2.0	1.5	1.1	
Goodwill	8.6	8.4	9.3	9.3	9.3	9.3	9.3	9.3	
Long-term receivable	1.5	1.4	1.8	1.8	1.8	1.8	1.8	1.8	
Other	21.7	5.0	12.5	12.5	12.5	12.5	12.5	12.5	
Non-current assets	58.6	39.1	49.8	56.6	64.0	71.0	77.5	83.6	
Accounts receivable	5.6	7.7	9.9	12.9	16.4	20.2	24.0	28.2	
Cash and cash equivalents	42.3	63.0	65.7	76.0	97.4	134.7	189.4	252.2	Monetisation will support cash accumulation
Other	5.3	4.2	4.8	4.8	4.8	4.8	4.8	4.8	
Current assets	53.2	75.0	80.4	93.6	118.5	159.7	218.2	285.1	
Total assets	111.8	114.1	130.2	150.2	182.5	230.7	295.7	368.7	
Accounts payable	11.7	14.6	35.3	34.6	42.1	54.2	69.2	76.2	
Total current liabilities	11.7	14.6	35.3	34.6	42.1	54.2	69.2	76.2	
Interest-bearing borrowings	27.4	18.8	0.0	0.0	0.0	0.0	0.0	0.0	
Deferred tax liability	1.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Other non-current liabilities	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.3	
Total non-current liabilities	30.1	20.9	2.3	2.3	2.3	2.3	2.3	2.3	
Issued capital	17.3	16.9	16.7	19.9	19.9	19.9	19.9	19.9	
Treasury shares	-12.5	-8.4	-3.8	-3.8	-3.8	-3.8	-3.8	-3.8	
Reserves	3.1	0.9	1.9	1.9	1.9	1.9	1.9	1.9	
Retained earnings	62.2	67.7	68.0	87.3	112.0	146.4	192.6	251.9	
Equity	70.1	77.1	82.8	105.2	129.9	164.4	210.6	269.9	
Minority interest	0.0	1.5	9.8	8.1	8.2	9.8	13.7	20.4	
Total equity and liabilities	111.8	114.1	130.2	150.2	182.5	230.7	295.7	368.7	
Net cash	33.3	44.3	65.7	76.0	97.4	134.7	189.4	252.2	We expect Yandex to significantly improve its net cash position within the following 5 years
Net cash as % of market cap	5%	7%	10%	12%	15%	21%	30%	40%	
Net debt / EBITDA	-0.9x	-1.6x	-1.9x	-2.3x	-2.0x	-2.1x	-2.2x	-2.4x	

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 63: We forecast strong cash accumulation on the back of solid profitability increase

Key cash flow forecasts for Yandex

Cash flow, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	Commentary
Earning before tax	13.6	11.1	13.6	54.5	35.3	50.3	68.8	89.9	Strong operational performance and improving cash position imply strong bottom line dynamics
Cash flow from operations	19.6	25.4	23.8	26.1	44.2	62.9	82.8	93.2	
PPE Capex	(13.0)	(9.6)	(12.4)	(19.0)	(22.8)	(25.6)	(28.1)	(30.4)	We expect capex as % of sales to decrease gradually within the forecast period
Other	1.4	(3.5)	4.6	-	-	-	-	-	
Cash flow from investing	(11.7)	(13.1)	(7.8)	(19.0)	(22.8)	(25.6)	(28.1)	(30.4)	
Cash flow from financing	(6.0)	(5.0)	(0.6)	3.1	-	(0.0)	-	-	
FX effect	4.7	(3.3)	(1.0)	-	-	-	-	-	
Increase in cash	6.6	4.0	14.4	10.3	21.4	37.3	54.7	62.8	
FCF	6.5	15.8	11.4	7.2	21.4	37.3	54.7	62.8	On our estimates, YNDX will grow its FCF with c.41% CAGR in 2017-22E

Source: Company data, Goldman Sachs Global Investment Research

Mail.ru: Key assumptions and financial forecasts

Exhibit 64: Strong topline and margin increases, coupled with declining capex intensity, to drive FCF boost

Mail.ru: Key financials

Key financials, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	CAGR		Commentary
									2015-17	2017-22E	
Revenue	36.8	42.8	57.5	73.6	88.8	101.9	114.3	126.7	25%	17%	Strong growth across all operational segments coupled with...
EBITDA	18.1	17.9	20.6	21.3	32.1	39.9	46.8	53.7	6%	21%	...monetisation-driven margins expansion translate to solid EBITDA growth...
CAPEX	2.7	3.8	4.4	5.6	6.6	7.4	8.0	8.6	28%	15%	...which combined with stable capex intensity...
FCF	11.3	8.8	14.9	15.0	21.5	28.4	34.0	40.0	15%	22%	...support solid FCF generation growth for Mail.ru

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 65: We see advertising revenues as a key earnings driver

Revenue by segment and EBITDA forecast for Mail.ru

Revenue & EBITDA by segment, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	Commentary
Advertising revenues	14.6	18.4	23.8	31.3	39.4	48.0	55.9	64.7	Mail.ru's advertising revenues growth should further be driven by strong opportunity in social networks and overall ongoing trends in digital advertising in Russia
yoy growth, %	19.4%	26.1%	28.9%	31.8%	25.9%	21.7%	16.4%	15.8%	
MMO games	9.4	11.4	17.4	22.9	26.9	29.1	31.1	32.1	We expect significant deceleration in games, which may prove to be conservative
yoy growth, %	11.7%	21.2%	53.0%	31.3%	17.4%	8.4%	6.7%	3.3%	
Community IVAS	12.5	11.9	13.9	14.3	14.6	14.6	14.6	14.5	We expect stagnating IVAS revenues and thus segment's decline as a share of Group revenues
yoy growth, %	5.4%	-5.2%	17.6%	2.7%	1.7%	0.0%	-0.1%	-0.1%	
Other	0.2	1.1	2.3	5.1	7.9	10.3	12.8	15.4	Other revenues should be supported by such highly growing businesses as Delivery Club and Youla, coupled with potentially new experimental initiatives
yoy growth, %	39.5%	357.1%	119.2%	118.0%	55.0%	30.0%	25.0%	20.0%	
Total revenue	36.8	42.8	57.5	73.6	88.8	101.9	114.3	126.7	
yoy growth, %		16.3%	34.4%	28.1%	20.6%	14.8%	12.2%	10.8%	
Operating costs	-18.6	-24.8	-36.9	-52.3	-56.7	-62.0	-67.5	-73.0	
Total EBITDA	18.1	17.9	20.6	21.3	32.1	39.9	46.8	53.7	
margin, %	49.3%	41.9%	35.8%	28.9%	36.2%	39.2%	40.9%	42.4%	Higher monetization and decelerating growth of operating costs will drive Mail.ru's margins

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 66: We forecast c.24% EPS CAGR over the next 5 years on the back of revenue and margin expansion

Key P&L forecasts for Mail.ru

Income statement, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	CAGR		Commentary
									2015-17	2017-22E	
Revenue	36.8	42.8	57.5	73.6	88.8	101.9	114.3	126.7	25.0%	17.1%	Topline dynamics is driven mainly by growth in advertising and other revenues
yoy growth, %	12.4%	16.3%	34.4%	28.1%	20.6%	14.8%	12.2%	10.8%			
Operating cost	-18.6	-24.8	-36.9	-52.3	-56.7	-62.0	-67.5	-73.0	40.7%	14.6%	
yoy growth, %	17.6%	33.2%	48.6%	41.7%	8.3%	9.4%	8.9%	8.1%			
EBITDA	18.1	17.9	20.6	21.3	32.1	39.9	46.8	53.7	6.5%	21.2%	Profitability improvement across experiments and operating scale will drive margins
margin, %	49.3%	41.9%	35.8%	28.9%	36.2%	39.2%	40.9%	42.4%			
D&A	-2.3	-2.9	-3.6	-4.5	-5.3	-5.6	-5.9	-6.2			
as % of sales	6.3%	6.8%	6.2%	6.1%	6.0%	5.5%	5.1%	4.9%			
EBIT	15.8	15.0	17.0	16.8	26.8	34.4	40.9	47.5	3.6%	22.9%	
margin, %	43.0%	35.1%	29.5%	22.9%	30.2%	33.7%	35.8%	37.5%			
Net interest expenses	-1.7	0.1	0.5	0.6	1.0	1.9	3.0	4.3			
Other gains and losses	-1.4	0.0	0.0	-1.7	0.0	0.0	0.0	0.0			
Taxes	-2.8	-3.5	-3.2	-3.3	-5.8	-7.6	-9.2	-10.9			
tax rate, %	21.7%	23.0%	18.4%	21.0%	21.0%	21.0%	21.0%	21.0%			
Other adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Net income	9.9	11.6	14.2	12.4	21.9	28.6	34.7	40.9	20.1%	23.5%	
margin, %	26.8%	27.1%	24.8%	16.9%	24.7%	28.1%	30.3%	32.3%			Net income will be supported by strong operational performance and improving net cash position

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 67: We expect significant cash accumulation in the medium term, providing optionality for M&A

Key balance sheet forecasts for Mail.ru

Balance Sheet, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	Commentary
PPE	3.7	3.8	4.5	14.4	15.9	17.6	19.5	21.4	
Intangible assets	30.9	29.9	24.9	24.2	24.0	24.0	24.3	24.8	
Goodwill	126.7	132.3	133.1	133.3	133.3	133.3	133.3	133.3	
Investments in associates	0.6	0.6	1.0	2.8	2.8	2.8	2.8	2.8	
Other	4.5	5.3	4.3	4.3	4.3	4.3	4.3	4.3	
Non-current assets	166.5	172.0	167.8	178.9	180.2	182.0	184.2	186.6	
Accounts receivable	3.6	5.1	6.6	9.1	10.9	12.6	14.1	15.6	
Cash and cash equivalents	8.7	5.5	15.4	18.7	40.2	68.7	102.7	142.7	Cash accumulation to be driven by improving monetisation trends
Other	3.3	2.5	1.9	1.9	1.9	1.9	1.9	1.9	
Current assets	15.5	13.1	23.8	29.7	53.0	83.1	118.6	160.1	
Total assets	182.0	185.0	191.6	208.6	233.3	265.1	302.8	346.7	
Accounts payable	8.7	11.1	13.1	15.1	17.0	19.6	21.9	24.3	
Other	7.9	3.8	2.9	3.7	4.5	5.1	5.8	6.4	
Total current liabilities	16.6	14.9	16.0	18.8	21.5	24.7	27.7	30.7	
Interest-bearing borrowings	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Deferred tax liability	4.9	3.3	2.5	2.5	2.5	2.5	2.5	2.5	
Other non-current liabilities	1.7	3.5	7.0	7.0	7.0	7.0	7.0	7.0	
Total non-current liabilities	16.9	6.7	9.5	9.5	9.5	9.5	9.5	9.5	
Issued capital	49.3	51.8	51.7	51.7	51.7	51.7	51.7	51.7	
Treasury shares	-1.3	-1.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Reserves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Retained earnings	100.4	112.9	114.8	128.9	150.9	179.5	214.1	255.0	
Equity	148.4	163.4	166.1	180.2	202.1	230.8	265.4	306.3	
Minority interest	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	
Total equity and liabilities	182.0	185.0	191.6	208.6	233.3	265.1	302.8	346.7	
Net cash	-6.5	5.4	15.4	18.7	40.2	68.7	102.7	142.7	Mail.ru's net cash position is expected to improve significantly on a 5-year horizon
Net cash as % of market cap	-2%	2%	5%	6%	12%	21%	31%	43%	
Net debt / EBITDA	0.4x	0.3x	-0.7x	-0.9x	-1.3x	-1.7x	-2.2x	-2.7x	

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 68: We expect decent cash accumulation on the back of improving profitability and overall top-line growth

Key cash flow forecasts for Mail.ru

Cash flow, RUBbn	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	Commentary
Earning before tax	12.7	15.1	17.4	15.8	27.8	36.3	43.9	51.8	Bottom line to be driven by improving operating trends, coupled with strengthening cash position
Cash flow from operations	13.9	12.6	19.3	20.6	28.1	35.8	42.0	48.6	
PPE & Intangible Capex	(2.7)	(3.8)	(4.4)	(5.6)	(6.6)	(7.4)	(8.0)	(8.6)	We expect capex as % of sales to decrease gradually within the forecast period
Other	(0.5)	3.3	(3.4)	(11.7)	-	-	-	-	
Cash flow from investing	(3.2)	(0.6)	(7.8)	(17.3)	(6.6)	(7.4)	(8.0)	(8.6)	
Cash flow from financing	(7.0)	(15.2)	(1.6)	-	-	-	-	-	
FX effect	0.3	0.0	(0.0)	-	-	-	-	-	
Increase in cash	4.1	(3.2)	9.9	3.4	21.5	28.4	34.0	40.0	
FCF	11.3	8.8	14.9	15.0	21.5	28.4	34.0	40.0	On our estimates, Mail.ru will grow its FCF with c.22% CAGR in 2017-22E

Source: Company data, Goldman Sachs Global Investment Research

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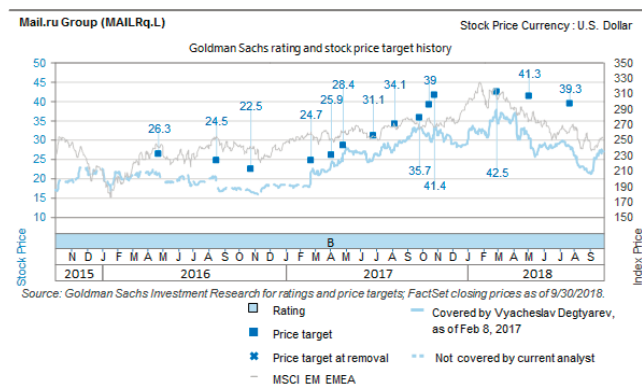
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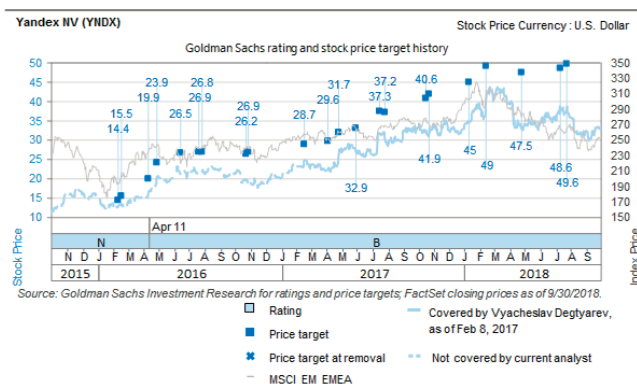
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