

How technology is driving retail in Africa

A report by The Economist Intelligence Unit



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Contents

Executive Summary	2
Smartphones: gateway to the internet	5
Mobile apps and the infrastructure shortfall	6
Growth of e-tailing	7
Plugging the gap with e-commerce	9
Bumpy way forward	11
Market profile: A tale of two countries	13
South Africa	13
Nigeria	13

Executive Summary

The African e-commerce sector is growing strongly, largely on the back of increased smartphone take-up among African consumers, who are using mobiles to access a variety of e-commerce shopping platforms. This increasing access to technology, via avenues such as smartphones, is helping consumers in previously hard to reach areas to access all manner of e-commerce opportunities, including emerging African fashion. Estimates as to the potential value of Africa's e-commerce vary, but it could be worth as much as US\$75bn per year within the next decade. However, several obstacles to e-commerce growth remain, including fear of fraud among African consumers, a logistics network beset by problems, the fragmented nature of African retail markets, a pressing need to improve telecoms network infrastructure and the entrenched problem of illiteracy among a significant proportion of the African population.

In this report, we use bespoke EIU Canback data to highlight the countries and metro regions in the African continent with the biggest potential for e-commerce growth, while highlighting the trends and developments in the market. In this report, carried out in collaboration with analysts across our telecoms, retail and African editorial teams, we show how smartphone adoption and usage is helping to shape the African retail sector and bring a broader range of retail options to increasing numbers of consumers in the region. Among the key takeaways in this report:

- Nigeria is in pole position to take advantage of e-commerce potential, on the basis of its high business environment opportunity potential
- Estimates suggest that e-commerce sales in Africa could reach somewhere in the region of US\$50-75bn per year within the next 5-10 years
- Smartphones are a gateway tool to the internet for Africans, especially in Nigeria, where the mobile penetration rate is forecast to rise from 103 per 100 in 2016 to 122 per 100 by 2021
- Jumia and Konga are two of the biggest e-commerce companies in the continent, and in Nigeria nearly three-quarters of users access the Jumia platform via their mobile phones
- Despite the opportunities, fear of fraud, poor transport and mobile infrastructure, supply-chain barriers and the fragmented nature of retail markets in Africa will hold back e-commerce growth in the continent

Understanding these trends, opportunities and obstacles is critical for retail firms already active in the African continent or looking to establish a presence. Significant investment from both the public and private sector is needed to ensure obstacles are overcome and e-commerce can flourish in the region. The retail dominance of physical shopping outlets in Africa is unlikely to be toppled anytime soon. Consumers in African countries prefer to use a network of physical stores, street traders and informal market sources for their purchases, which are predominantly carried out in cash. But for those companies that are willing to adopt a long-term approach in shaping a burgeoning sector, the gains will be numerous.



Retail in Africa has largely been shaped over the years by a more informal shopping experience than that of the West. To this day, Africans prefer to use a network of physical stores, street traders and informal market sources for their purchases, which are predominantly carried out in cash. The relative lack of sophistication in the nature of many transactions in Africa reflects a paucity of infrastructure, as well as insufficient familiarity and trust with alternative sources. That is changing, however. A large number of malls have been built in Africa, and consumers flock to these in order to partake in a more engrossing shopping experience, which constitutes a day out for many families. In addition, although smartphone penetration, mobile broadband usage and network coverage and speed remain low, they are growing fast, leading to a “leapfrogging” effect where an increasing number of Africans are embracing the potential of e-commerce by using mobiles, rather than personal computers (PCs), for their online purchases.

According to EIU Canback data, Nigeria is the most promising country in the region in terms of its business environment opportunity potential—used to describe the potential market opportunities present in a particular city, region or country. The data use external-environment indicators relating to the overall business environment, market opportunities, mobile subscriber penetration rates (per 100 people) and PC ownership (per 100 people), which provide Nigeria with a business environment opportunity score of 80.4 out of 100. This therefore places the country in pole position to take the lead in the African e-commerce market.

This is backed up by the plethora of activity in the market, with Nigeria the focal point for a significant amount of e-commerce growth in the region. The country’s three main online retailers—Jumia, Jiji and Konga—serve a mass-market clientele. Jumia celebrated its fifth anniversary in June, having become the first company to surpass US\$1bn in market value on the continent in February 2016. Dubbed the “Amazon of Africa”, the Jumia.com shopping site operates in 11 African countries, and the parent company manages African equivalents of various Western consumer-goods sites, including Hotels.com and Uber.

Business Environment Opportunity Rankings, 2016

(Rankings at both country and city level)

Geography	Opportunity		External environment indicators			
	Rank	Score	Overall business environment rating	Market opportunities rating	Mobile subscribers (per 100 population)	Personal computers (per 100 population)
Nigeria	1st	80.4	4.5	5.0	82.5	12.8
South Africa	2nd	63.0	6.0	5.4	171.4	23.8
Congo (Democratic Republic)	3rd	58.0	3.9	5.0	79.0	38.8
Ethiopia	4th	50.8	4.3	4.5	32.7	3.2
South Africa: Johannesburg	5th	47.6	6.1	5.4	167.8	23.8
Ghana	6th	46.4	5.3	5.3	115.2	22.7
South Africa: Durban	7th	45.6	6.1	5.4	167.8	23.8
South Africa: Cape Town	8th	45.4	6.1	5.4	167.8	23.8
South Africa: Pretoria	9th	45.1	6.1	5.4	167.8	23.8
South Africa: Port Elizabeth	10th	44.8	6.1	5.4	167.8	23.8
South Africa: Emfuleni	11th	44.7	6.1	5.4	167.8	23.8
Kenya	12th	41.9	5.0	4.1	74.1	12.6
Congo (Democratic Republic): Kinshasa	13th	40.5	3.9	5.0	79.0	38.8
Mali	14th	40.2	5.1	5.3	149.9	7.9
Tanzania	15th	40.0	5.0	4.3	63.1	3.6
Ghana: Kumasi	16th	39.1	5.3	5.3	115.2	22.7
Ghana: Accra	17th	39.0	5.3	5.3	115.2	22.7
Ghana: Sekondi Takoradi	18th	38.5	5.3	5.3	115.2	22.7
Gabon	19th	38.4	5.2	5.2	171.7	9.9
Gabon: Libreville	20th	38.1	5.2	5.2	171.7	9.9

Source: EIU Canback



Smartphones: gateway to the internet

Smartphone adoption in Nigeria has been growing strongly. According to the Nigerian Communications Commission, mobile subscriptions accounted for 99.9% of all phone subscriptions as at end-2016, while the number of active mobile internet subscriptions (at 91.9m, or 59.6% of total subscriptions) represents one of the highest rates of mobile internet usage in the world. According to Statcounter, a web-traffic analysis tool, as at January 2017 Nigeria topped the list of countries with the highest percentage of online sites viewed on mobile phones, at 81%, compared with the global average of 50%.

But it is not just Nigeria that is seeing growth in both internet use and the adoption of smartphones as the main device for accessing internet content. According to Economist Intelligence Unit data, the mobile subscriber penetration rate across Sub-Saharan Africa stood at an estimated 103 per 100 people in 2016, and is forecast to rise to 122 by 2021. Meanwhile, the *Digital in 2017* report commissioned by a media company, We Are Social, and a social media management platform, Hootsuite, found that seven of the ten fastest-growing internet populations in the world are in continental Africa. This is despite the continent having one of the lowest levels of mobile connectivity in the world (measured as the number of mobile connections compared with the population), at just 81%, compared with 139% for eastern Europe.

Much of the growing rate of smartphone adoption among Africans is the result of a concerted effort from operators to roll out networks and develop strategies that enable Africans to consume mobile data. The rollout of 4G is progressing apace: by mid-2016 there were 72 live long-term evolution (LTE, a 4G communications standard) networks in 32 countries across the continent, according to the GSMA, a trade body that represents the interests of mobile operators. Many of these networks had been launched within the preceding two years. This trend is driven by both a steady decline in the cost of smartphones, as well as growing take-up of mobile broadband packages among many African users. The GSMA estimates that mobile broadband connections accounted for a quarter of total mobile connections at the end of 2015, but this is set to rise to almost two-thirds by 2020. Although falling commodity prices have hit economic growth in some countries in the region, which has also had an adverse impact on operator revenue, capital expenditure in the telecommunications sector is likely to remain strong. This is largely because the African market remains relatively underdeveloped, despite fairly high levels of penetration, and because mobile applications and technologies have the potential to address a wide variety of structural shortcomings on the continent.

Mobile apps and the infrastructure shortfall

Africa has to counter many challenges in order to broaden internet access and deliver robust and reliable connectivity to the millions of consumers eager to take advantage of mobile access. But as has been seen in Kenya, mobile connectivity has the potential to bridge significant gaps in services. M-Pesa, a mobile payment service, has made up for the shortfall in traditional banking services in Kenya since it was introduced in the country in 2007. Its growth has been held up as a model for how to deliver services to a relatively impoverished and unbanked population, having been credited by the Massachusetts Institute of Technology for lifting around 2% of Kenyans out of poverty. The service is used for around 79% of mobile banking transactions and processed around US\$8.2bn-worth of payments in the third quarter of 2016. It has around 18m active users in Kenya and some 30m users spread across ten countries, mostly in Sub-Saharan Africa. Uses of mobile technology are not limited to personal finance, however. Other applications include healthcare (by spreading awareness of diseases and assisting in diagnostics services), supporting humanitarian efforts, informing decision-making for farmers in the agricultural field, enabling female empowerment (through income management apps, information on pregnancies and promotion of financial inclusion with mobile money services), water sanitation, energy and transport. Mobile services and innovation therefore have a critical role to play in educating and informing Africans for a variety of needs.



Growth of e-tailing

Africans are also increasingly using mobile services to meet the consumer-oriented demands of a more connected African society. Enthusiasm towards e-commerce among Africans is growing, for a variety of reasons. The number of retail stores in Nigeria, for example, is low, with formal retailing accounting for just 1% of total retail sales. In mid-June 2017 the Nigerian capital, Lagos, had two major shopping malls catering to a population of around 25m people. In part, this was because of a fall in the oil price in 2015, with the subsequent economic downturn meaning that many proposed mall developments were halted. An entrenched and well-developed informal sector picked up much of the slack, but Nigerians have continued to turn to e-commerce as a complement to their retail needs. The oil price has since recovered somewhat, albeit not to the extent that Nigeria's economy is booming once again—Brent crude is trading at below US\$50/barrel, from highs of more than US\$100/b two years ago—and commodity price falls have hit other economies in the region, suppressing confidence and spending power. In real terms, retail sales in Nigeria are in a two-year slump. Given that e-commerce in Sub-Saharan Africa is largely concentrated among the middle class, which has been squeezed by the economic downturn, online sales have therefore also suffered. Nonetheless, mall construction has resumed and their number now stands at around a dozen. However, as mentioned, the majority of Nigerians (and Africans more generally) obtain their wares from an informal patchwork of street traders and small independent shops.

Supported by an operator focus on expanding network coverage and delivering more advanced connection speeds via LTE services, Africans are turning towards e-commerce in ever-increasing numbers. This is owing to a variety of factors. An expanding middle-class population is one reason, while the large number of Africans moving from rural to urban areas in search of employment, resulting in rising levels of disposable income, is another. However, e-commerce is equally successful in increasing access to shopping services in rural areas. In Nigeria, for example, e-commerce is serving rural areas effectively, as companies such as Jumia are able to deliver to less accessible places, where sourcing goods from shops or stalls is not as straightforward. This newfound access to technology is one of the primary drivers of e-commerce growth in Africa, and will sustain growth throughout the forecast period, straddling different socioeconomic segments of the population.

Nonetheless, the number of Africans living in cities is set to triple by 2050, and by 2035 around half of the African population will live in urban centres. This will result in a growing urban consumer class in Africa, spurred by an increasingly younger demographic. The more affluent segment of the population—earning more than US\$5,000 per year—is also set to increase substantially, with Lagos forecast to have the highest number of households in this income range by 2030, followed by Johannesburg in South Africa and Abidjan in Côte d'Ivoire. The number of households in this bracket is expected to grow by 96% between 2015 and 2030 in Lagos (to 6.9m), by 83% in Johannesburg (to nearly 3.5m) and by 109% in Abidjan (to 2.7m). Meanwhile, Burkina Faso's capital, Ouagadougou, will see this number rise by more than sevenfold to 423,000, and the capital of Malawi, Lilongwe, will see a five-fold increase, to 126,000, albeit from a smaller base.

**Number of households earning > US\$5,000 per annum
(‘000s)**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Nigeria: Lagos	3,550	3,709	3,875	4,043	4,227	4,420	4,626	4,840	5,066	5,302	5,544	5,796	6,069	6,354	6,655	6,972
South Africa: Johannesburg	1,904	1,877	1,892	1,880	1,980	2,069	2,164	2,270	2,382	2,510	2,651	2,800	2,959	3,130	3,309	3,489
Côte d’Ivoire: Abidjan	1,298	1,399	1,463	1,593	1,742	1,854	1,975	2,062	2,147	2,229	2,309	2,386	2,465	2,547	2,631	2,717
Congo (Democratic Republic): Kinshasa	649	633	523	593	665	737	810	895	994	1,114	1,298	1,505	1,713	1,924	2,141	2,404
Kenya: Nairobi	681	722	763	810	860	920	987	1,056	1,120	1,183	1,245	1,307	1,369	1,431	1,494	1,558
Nigeria: Ibadan	712	737	766	795	829	867	909	955	1,005	1,057	1,112	1,170	1,228	1,289	1,354	1,420
Sudan: Khartoum	814	841	866	891	917	946	976	1,007	1,041	1,076	1,112	1,150	1,187	1,226	1,265	1,306
Angola: Luanda	813	837	866	893	920	947	976	1,005	1,036	1,067	1,099	1,132	1,167	1,202	1,238	1,276
Nigeria: Port Harcourt	540	573	608	643	681	720	762	804	849	896	943	993	1,045	1,099	1,155	1,214
South Africa: Cape Town	672	660	663	659	690	717	745	777	810	848	890	935	983	1,036	1,091	1,148

Source: EIU Canback



Plugging the gap with e-commerce

Although this rising affluence is not causing Africans to abandon traditional shopping methods entirely, it is helping an increasingly aspirational consumer base to broaden its tastes.

E-commerce has given a significant proportion of Africans access to brand names not always readily available via informal avenues of retail. Although it remains underdeveloped, the e-commerce sector in Nigeria is worth around US\$13bn, according to This Day, a Nigerian-based business news website. And across Africa, the continent is primed to generate yearly e-commerce sales totalling around US\$75bn by 2025, according to a consultancy company, McKinsey. Other, more bullish forecasts put sales at around US\$50bn by 2018. By comparison, e-commerce sales in Europe stood at an estimated €530bn in 2016, accounting for 30% of the global total, suggesting that the African market is still in its nascent stages of development.

Jumia and Konga are some of the biggest e-commerce companies on the continent, delivering online shopping via their marketplace platforms. Both of these companies sell a wide range of goods but have found particular success in the fashion and mobile-phone sectors. In the case of Jumia, a significant part of its success is down to the way smartphone use is driving e-commerce activity. According to Jumia's CEO, Juliet Anammah, around 71% of the company's Nigerian users access the marketplace portal via their mobile phones. However, the rest of the continent is still playing catch-up, with 53% of Jumia's customers from other African countries using smartphones to carry out their online orders.

In Kenya, e-commerce growth is also strong. According to the Communications Authority of Kenya, the nation's consumers spent more than KSh10bn (about US\$100m) in 2016, up from KSh2.4bn in 2014. The country's embrace of technology is exemplified by the 17m users of the M-Pesa mobile money platform, but also by the fact that, as at June 2016, there were 26.8m internet/data subscriptions, the overwhelming majority of which were mobile data connections. Indeed, internet access via means other than mobile constitutes less than 1% of total subscriptions. And much like Nigeria, the Jumia marketplace portal is one of the main e-commerce players. However, as is the case elsewhere in Africa, a lack of trust in online transactions prevails, with most Kenyans preferring to pay for goods in cash. As a result, several e-tailers have adjusted their propositions to allow customers to pay in cash on delivery, or via M-Pesa. That said, e-commerce is in its nascent stages in Kenya, largely because of the advanced nature of the formal retail sector, which is second only to South Africa in maturity.

The South African retail sector is somewhat different from the rest of the continent, with improved infrastructure, internet access, mobile penetration and a larger proportion of middle-class consumers all contributing to greater e-commerce growth prospects. The majority of South Africa's major retailers have an e-commerce presence, while the country also counts on a variety of online-only retail companies. Although online trade contributes to only a small proportion of overall sales for retailers with a physical store presence, several companies have seen considerable growth in site visits, revenue and turnover growth from their internet offerings. A local retailer, Massmart, claims that it saw a 74%

year-on-year increase in visitors to its Makro website in 2016, while Pick n Pay, the second-largest supermarket chain in South Africa, saw its e-commerce revenue increase by 38% last year. Despite this growth, and South Africa's relative online sophistication compared with other countries in Africa, there remain challenges around internet access and low income levels in the country, potentially holding back e-commerce growth.

Away from marketplace portals, some e-commerce growth comes from increasing interest in the fashion and apparel sector. Again, the continent's most populous country, Nigeria, takes the lead, with its online apparel market set to grow from US\$104m in 2014 to around US\$1.1bn in 2019, according to a market research firm, Euromonitor International. While companies such as Jumia and Konga serve the mass market for e-tailing in the region, well-heeled, brand-conscious Africans are also being catered to. At the beginning of 2017 Africa saw the first launch of a luxury e-commerce network. Polo Avenue, a Nigerian-based luxury retailer that operates across West Africa, launched an e-commerce platform in March, shipping its products across the African continent. Focusing on high-end brands such as Gucci and Dolce & Gabbana (Italy), Rolex (Switzerland) and Cartier (France), the platform caters to a client base that it claims is willing to spend around US\$1,000-2,000 per visit, usually on a monthly basis, together with high-net-worth individuals that are willing to spend tens of thousands of dollars.

But perhaps most interestingly, Polo Avenue is also using its e-commerce capability as a means of showcasing African brands and upcoming regional designers. Indeed, as much as the e-commerce market in the region caters to African consumers that want to be able to purchase globally recognised brands, as well as home-grown talent, the e-commerce market also serves as a means of making African fashion accessible to a global audience.

Online platforms such as Kisua and ONYCHECK serve both as a means of championing regional talent, and ensuring that the work of African designers is made available on a global scale. Based in New York, the ONYCHECK platform sells African designs to customers in the US, Canada and the UK, while OXOSI, another New York-based platform established in 2016, also tries to showcase emerging African brands with a global client base. There are around 25 African designers currently exhibiting their designs on the site.



Bumpy way forward

Although e-commerce has grown on the back of technological innovation, increasing smartphone usage and rising demand from consumers with bigger disposable incomes, it is far from posing any major threat to physical retail outlets. The fashion industry has undoubtedly benefitted from the flexibility and reach that an internet platform can provide, helping to propel African fashion into global markets, but Africans still overwhelmingly use shopping malls and the informal sector for their shopping needs. This creates a barrier to entry for budding e-commerce firms, given that they have to prise consumers away from traditional informal traders, which comprise a formidable competitive force.

Indeed, growth of both the bricks-and-mortar and e-commerce sectors are restrained by a variety of systemic, structural issues that prevent the retail market from flourishing further. The first is fear of fraud from African consumers. The unreliable nature of connectivity, coupled with the fact that few Africans own and use credit or debit cards, mean that most consumers prefer to pay cash on delivery. Online transactions have yet to be an area that most Africans deem trustworthy, and many consumers still currently believe that any demand for payment from an online source represents a scam. Fear of fraud will therefore take some time to tackle.

This fear is exacerbated by a logistics network beset by problems—poor transport infrastructure and intermittent provision of electricity probably being the most debilitating. To make matters worse, address records in many African nations are sub-standard, meaning that instances of undelivered packages, mislaid items or delays are frequent. This lack of infrastructure drives up the cost of delivery, making it challenging for a start-up e-commerce company to be able to deliver products using economies of scale. Significant levels of investment from both the public and private sectors are therefore needed to push the e-commerce sector forward. Online commerce platform Konga is playing its part, having pledged to double the size of its Lagos-based distribution centre in 2017, to 120,000 sq ft, and build a host of new distribution centres across Nigeria. The company hopes that it can slash order processing times by increasing its storage capabilities, perhaps by as much as 90%, from 40 hours to as little as three.

For a company that has set its sights beyond just national borders, the challenges are even greater. The fragmented nature of retail markets across the region means dealing with all manner of crossborder regulation, paperwork and tariffs. The lack of a regional technical regulations framework, for example, has hampered adoption rates of harmonised regional standards in many African countries. Frequent misunderstandings between different stakeholders on the roles of different national institutions, along with a lack of co-ordination between these bodies, has made harmonisation challenging. That situation could improve in time, however, with regional groups such as the Southern African Development Community and the East African Community committed to greater trade harmonisation. But even within borders, regulations can sometimes be punitive.

In Nigeria, for example, luxury goods are subject to a tax of 5%, and the government has previously discussed plans to raise this to 15%.

Even if e-commerce manages to tackle these physical infrastructure impediments, and mobile operators manage to plough ever greater levels of capital expenditure to ensure that network coverage is both extensive and robust, a potentially bigger problem remains. Levels of basic literacy in Africa are perhaps the lowest of any continent in the world. Around 153m adults in Africa (around 38% of the population) are considered illiterate, making literacy perhaps the biggest impediment to mass take-up of e-commerce. These entrenched structural issues are therefore likely to hold e-commerce back, and are unlikely to pose a threat to bricks-and-mortar outlets or the informal sector anytime soon. However, the irrefutable point is that access to technology is on the rise in continental Africa, bringing a larger range of goods to a wider range of consumers, and that signals a positive future for e-commerce companies that are prepared to play a long-term game in shaping a burgeoning sector.



Market profile: A tale of two countries

South Africa

Perhaps the country most primed to take advantage of the potential of e-commerce is South Africa, where mobile penetration rates are higher, infrastructure is more sophisticated and the middle class more expansive and willing to engage in online purchasing. The country lags behind the US and Europe in terms of e-commerce, although the local business-to-consumer market also offers a number of services similar to those found in its overseas counterparts. World Wide Worx, a local technology research firm, estimates that online spending surpassed R9bn (US\$610m) in 2016, reaching the important milestone of 1% of the R900bn overall retail market. Online retail has been growing by more than 20% per year since 2000, according to the firm. A 2015 study by a market research firm, Ipsos, revealed that 22% of South African internet users said that they had made purchases online and 48% expected to do so

in future. In addition, many South Africans engage in crossborder shopping, further broadening the opportunities for revenue gains for e-tailers. According to a crossborder commerce report by a global payments firm, PayPal, and Ipsos, in 2016 around 43% of South Africans shopped across borders.

Both mobile penetration and mobile infrastructure are notably more advanced in South Africa compared with the rest of the continent. The market has reached maturity, with a penetration rate of 171% in 2016, which we forecast to rise to just under 197% by 2021. This rise is likely to be fuelled, in no small part, by the demographic shift of greater swathes of the black population joining the ranks of the more affluent, with greater disposable incomes. On the infrastructure side, a lack of spectrum availability has hindered many operators' attempts to improve both network coverage and speed. This has therefore had an impact on providers' ability to encourage take-up of 4G connectivity, which is estimated to have accounted for just 4% of all mobile subscriptions in 2016.

Nigeria

Growth in e-commerce has been slow but has picked up in recent years, fuelled by high mobile penetration in the country. Indeed, mobile devices have been instrumental in expanding internet connectivity and broadening access to e-commerce technology. With the reduction in mobile tariffs already implemented by telecommunications operators and more cuts expected, services are becoming more affordable and essential to many Nigerians.

The biggest impediment to e-commerce growth is low PC penetration. The 2012/13 General Household Survey by the National Bureau of Statistics (latest available data) found that only 8.1% of the population had access to PCs. Availability varied between different parts of the country, with access at 12.8% in the south-central (locally referred to as South South), 10.9% in the south-western regions and only 2.9% in the north-west. Nonetheless, adoption of marketplace portals on mobile phones has made up

for some of the slack in PC usage. The number of active mobile internet subscriptions (at 91.9m, or 59.6% of total subscriptions) constitutes one of the highest rates of mobile internet usage in the world.

That said, e-commerce remains hampered by a lack of public awareness on how to use the technologies. Many people are weary or unsure about using mobile technology for purposes such as e-commerce, and there has been rapid growth in electronic cash-transfer services such as Western Union (US), Moneygram (US) and Travelex (UK) in recent years. Electronic banking is one area of e-commerce that has proved to be successful in Nigeria. Virtually all banks in the country offer online, real-time banking services. Such systems have now become commonplace, offering customers the flexibility of operating an account in any branch of their bank's network. The online service also lets customers conduct a variety of banking activities in any location of a particular bank. These services include deposits, withdrawals and the issuing of drafts.

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