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# JUMO: EXPANDING TOGETHER

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## Abstract

This case study analyses the evolution of the FinTech JUMO from its early founding years to its position in the Sub-Saharan African market in 2021. It discusses the funding rounds and partnership approach employed by JUMO as part of its market expansion strategy and highlights the intricacies and challenges of the digital financial services market operating on the back of increasing mobile phone penetration rates in the continent. The teaching note provided at the end of this case study considers key topics such as JUMO's funding and potential valuation, its business model and execution of strategic expansion plans, the possibility for success in the Nigerian marketplace, as well as the opportunities for alternative credit scoring in developed markets such as the EU and US.


Keywords (FinTech, Africa, Partnership, Alternative Credit Scoring, Financial Inclusion, Funding, Business Strategy)

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# JUMO: Expanding Together

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*"Our mission is to put great financial choices in people's hands, everywhere, whenever they want them. In emerging markets, it is the mass market that is excluded. We have built a sharing platform, allowing us to connect business and people without infrastructure constraints."*

– Andrew Watkins-Ball, Founder & CEO, JUMO[i]

## Background

It was February 14th, 2017 and Andrew Watkins-Ball, Founder and CEO of African Fintech JUMO stood on stage in a small meeting room at a Heavy Chef talk event in Cape Town, South Africa to discuss the impacts of data on the African FinTech market. Turning to face an audience filled with his peers and market professionals, Watkins-Ball looked for his wife in the crowd and with a smiling, guilty face he announced his gratitude to her for letting him speak at the evening's event on Valentine's Day. The audience laughed in unison, after which he proceeded to tell his story and the story of JUMO.

*Andrew Watkins-Ball*

Born and raised in Cape Town, South Africa, Watkins-Ball was an energetic individual with a strong interest in entrepreneurship. "*What drives me is doing something which can create positive systemic change*" he commented on the ultimate goal and vision for his ventures[ii]. He chose not to attend university but instead studied software engineering part-time after he left school. He began his career by working for Salomon Brothers investment banking in New York and London, where he went on to become a Vice President in charge of the High Yield Syndicate which eventually became the European Leverage Finance division of Citigroup. He built various companies over the years: a satellite communications firm Gateway Communications which was sold for $675 million in 2008 to Vodafone, MWB Capital which he co-founded in 2008, as well as Capitau and Addcapital. Following his passion to promote financial equality, Watkins-Ball directed his latest ventures towards the issue of financial inclusion. Back in the meeting room of the Heavy Chef event, Watkins-Ball asked the audience for their perspectives on how African consumers regard the banking system. “Stress”, “hesitancy” and “untrustworthy” were a few of the words called out[iii]. It was clear that there was a problem. One which Watkins-Ball passionately believed JUMO could solve. He turned to a whiteboard in the room and decided to write down his thoughts, he soon came to the realisation that he had in fact written with a permanent marker – a moment which one might even say symbolised that JUMO was here to stay.

*The Beginnings of JUMO*

In 2015, Watkins-Ball founded JUMO World Limited (Ltd.) – a FinTech (Financial Technology) company with the mission of making financial services more accessible to the ‘unbanked’ population in emerging markets such Sub-Saharan Africa (SSA). The first steps towards the creation of JUMO had in fact already begun in 2012 when the company was known as AfB (Mauritius) Limited. AfB had various subsidiaries including a micro-financing arm called AfB Ghana Plc, which was licensed by the Bank of Ghana as a non-bank institution, and which aimed to provide credit to unbanked consumers in the region. Initially JUMO leveraged the existing infrastructure of this legacy business in Ghana and worked to provide point-of-sale credit by becoming an AfB card provider. This concept of point-of-sale credit was and is still very popular in SSA as it allows consumers to purchase items that help meet their personal or business needs as and when they require them. However, Watkins-Ball soon realised the weaknesses of this business model, for instance the repayment performance of these micro short-term loans was not what he had initially thought. After testing his product in different markets with different strategies, Watkins-Ball identified key challenges to being a lender, such as managing debt and liquidity as well as managing the currency mismatch between the numerous African countries JUMO targeted. After considering these credit and currency risks amongst others, Watkins-Ball began to rethink his business model. It then became clear to him that there was great opportunity in the digital sphere, selling software as a service (SaaS). To test his concept, he decided to run a pilot programme with a telecommunications (telco) company called Airtel in Tanzania. The pilot introduced a new mobile finance product to the Tanzanian market by means of USSD (unstructured supplementary service data), a front-end application process which operates through mobile phones, allowing consumers to apply for short-term loans via their mobile devices. As they do this, JUMO's algorithm would begin pulling customer data from their device in order to generate a credit score which would confirm their eligibility to take out the loan. With this JUMO offers both a platform and a credit scoring capability. This new business model promised great opportunities for growth and scalability. A few months later, Watkins-Ball separated from AfB and rebranded to "JUMO" in 2015.

*JUMO's Vision & Mission*

JUMO's key mission is to address the issue of financial inclusion within the diverse African continent. Its platform allows more individuals and small, medium and micro enterprises (SMMEs) to have access to the funding they need and according to Watkins-Ball enables them to "*make good financial choices*"[iv]. Sitting at the heart of JUMO's expansion strategy is its partnership-based business model whereby it works with mobile network providers, called telcos, and banks in various countries to offer tailored products to unbanked consumers. With its platform which provides banking infrastructure and its unique algorithm which predicts credit scores, JUMO brings value to its partnerships which work to introduce new financial products such as short-term loans and savings offerings to these unbanked consumers in numerous markets. "*It's like Amazon for anything non-physical, Amazon for financial services*" Watkins-Ball commented[v]. He believed that expanding into these non-physical categories would allow for bigger scale and cost reduction. He explains how information companies such as Amazon, Facebook and Airbnb have "*used their technological capability to create an efficiency which they have given back to the customer*"[vi], and remarked how these companies have a strong product with a genuine purpose of solving a fundamental issue – something which Watkins-Ball believed banks were in fact not good at. A factor which can also lead to strong consumer liking and product virality. As such, he spent the latter years of JUMO's existence working to perfect his platform while placing consumers needs at the top of JUMO's priority list. Only once there was a strong proof of concept supported by a well-functioning operational model would Watkins-Ball take JUMO into new markets in the diverse continent.

## The African FinTech Market in 2015

In 2015, the African FinTech industry was at a coming-of-age stage, there were many new players introduced to the market, most aiming to tackle the financial inclusion issue. The key markets at the time were recognised as South Africa, Kenya and Nigeria. FinTechs here were largely supported by grants and funding from local and international investors as well as a variety of new accelerators such as the Africa Barclay's Accelerator Programme[vii], which aimed to nurture selected FinTechs and amplify their innovative solutions throughout the continent. At the time however, SSA was in fact in a state of economic slowdown due to political and economic difficulties and banks were said to be in a 'wait and see mode', considering next steps to attract more depositors in the face of heightened competitor pressures which nudged them towards increasing SME lending – a task which brought countless challenges[viii]. For instance, many African consumers lived in rural areas, being far from road connections and without access to internet[ix]. Travelling to a bank branch was therefore inconvenient and costly. Another key problem at the time was an evident lack of trust by consumers in banks. In the eyes of most banks, the market for these populations promised low marginal returns as customers were hard to access, needed convincing and had no financial records or data and therefore no credit score, presenting another challenge for banks to provide them with credit. As the market developed and startups ideated solutions to the region's key problems, mobile phones became the most effective way to reach these consumers. Telcos, and banks began to work together to find new ways to bring financial products to unbanked populations living in rural areas in SSA by means of their mobile phones. With mobile phone penetration rates increasing rapidly year-on-year **(see Exhibit 1)**, there was great opportunity for scalability and growing interest from international entrepreneurs and investors.

Even so, SSA was not without its fundamental challenges. For instance, low technological readiness, limited financial education of consumers and diversity in languages spoken across the continent called for better product adaptations and user-friendliness. Moreover, low consumer income levels pressured businesses to squeeze their margins in order to make products more affordable. Additionally, the limited infrastructure and key issues such as lack of access to basic necessities such as electricity created further challenges for expansion and cross-country operations. These issues impacted FinTech's wishing to flourish in the diverse marketplace and made expansion for most FinTechs a slow and tricky process. Having been raised in Africa, Watkins-Ball was well-aware of these market intricacies. Though the South African market was somewhat of an anomaly for FinTechs, he was determined to understand and tackle new market challenges and improve financial inclusion for the greater continent.

*Financial Inclusion*

Financial inclusion has been a key focal point for the industry for the past several years. A notable milestone was the launch of the Partnership for Financial Inclusion in 2012, a joint initiative between the Mastercard Foundation and the International Finance Corporation (IFC) which sought to develop the markets of digital financial services and microfinance in SSA. It was a seven-year programme backed by a funding amount of $37.4 million[x]. With a continental population of 1,034.6 million and only 6% of this population having access to formal borrowing and 34% with bank accounts (see **Exhibit 2** for key market indicators), SSA stood out as a region with concerningly low financial inclusion and a vast untapped market[xi]. Access to financial services varied across the continent in 2015, with Kenya (75%), South Africa (70%) and Nigeria (44%) showing the highest access percentages of their respective populations, whilst Zambia (36%) and Ethiopia (22%) were amongst those with lower access[xii]. Watkins-Ball believed that "*inequality was fundamentally unacceptable*"[xiii], and in a continent of countries with such varying natures, he knew he had a lot of work ahead of him.

## "A Very Tough Play Yard"

Unwavered by the complexity of the African marketplace, Watkins-Ball and the JUMO team worked to navigate a path towards success. This meant finding a way to reach unbanked consumers, gaining their trust, providing a product which is user friendly, providing a product which was low-cost – and replicating this across multiple markets. No problem.

*Perfecting the Product*

For a mobile finance product to be successful in the SSA market there needed to be special considerations for infrastructure requirements. In addition to being low cost, mobile finance services which sought to gain a competitive advantage and remain sustainable in the marketplace had to be modular so to allow for future adaptations, had to adhere to financial regulations, had to be compatible with other transaction-processing systems as well as other payment platforms, and lastly the communications infrastructure had to be secure from risks such as fraud[xiv]. After running its pilot programme in Tanzania, JUMO identified its solution as being USSD (unstructured supplementary service data). Looking back now Watkins-Ball states that JUMO "*grew up in a very tough play yard*", and Tanzania was "*probably one of the hardest markets in the world*" for them to launch in[xv].

The USSD communications infrastructure offered a more simple and secure means of communication than SMS (Short Message Service) and promised to be the best method to access low-income consumers in emerging markets such as SSA[xvi]. For example, if consumers needed to purchase new raw materials for their business, a new car or purchase electricity, they could simply use their mobile phone to dial a USSD short code specific to their telco provider and be taken to a menu through USSD technology where they could input their requirements, and in 20 seconds they would have their short-term micro-loan. See **Exhibit 3** for an infographic on one of JUMO's products launched in partnership. Today JUMO continues to use USSD technology to deliver new market offerings through its countless partnerships with banks and telcos. It has developed itself to become a banking software which enables. Its platform encompasses two key offerings, *Core* and *Unify*. The *Core* capability provides its partners such as banks and telcos with an end-to-end banking infrastructure platform to support mobile financial services, whereas its *Unify* capability works to reduce the risks and costs of lending by providing data analysis powered by artificial intelligence and machine learning algorithms which can support tasks such as credit scoring and fraud detection. Watkins-Ball worked for many years to prove the concept that non-traditional, alternative data such as mobile metadata and GSM records can be used to predict financial behaviour.

> *"What makes us different? We make credit decisions based entirely on mobile network data. How many calls you make, who are you calling, when you're calling, how much airtime are you using, where are you topping up, what kind of phone you have, whether you SMS or not. We have 10,000 variables for any individual."* – Johan Bosini, 2015 Managing Director, JUMO[xvii]

With the increasing mobile phone penetration rates in the region, this data would only continue to grow in richness, allowing JUMO to analyse datasets more efficiently and with more sophisticated data-driven prediction models with which it could establish a reliable 'JUMO score' of creditworthiness for consumers. Perfecting this algorithm was essential to JUMO's business model, as prediction accuracy ensured less risk for the banks providing loans and less risk meant costs could be reduced to make products more accessible to unbanked consumers.

*"The increase in our prediction capability decreases the cost of credit risk, allowing us to share more value with customers while driving sustainable returns for out bank partners.*"

– Andrew Watkins-Ball, Founder & CEO, JUMO [xviii]

What gave JUMO an additional competitive edge was its initiative to also focus on creating the right digital user experience (UX) in the products it helped to develop, an area where banks did not excel. Having a tailored, user-friendly platform allowed JUMO to meet the needs of the less technologically savvy and less financially educated consumers. By doing so JUMO was also able to truly 'own' the customer experience of the products it offered in partnership. This helped JUMO to create its niche in the market. In 2015, JUMO underwent a series of experiments to further perfect its products and better understand consumer behaviours around different communications methods used for digital, mobile financial services. It partnered with the think tank CGAP (Consultative Group to Assist the Poor) and the Busara Centre for Behavioural Economics for a study in Kenya which sought to address the two questions, firstly, how communication channels such as SMS can impact the behaviour of borrowers and secondly, how this can benefit the borrower and the lender. Additionally, the question of whether these behavioural economic insights could be used to influence borrower actions, for example to ensure timeous loan repayment. For the experiment, a digital credit product called "Top Cash" was developed as both a lab-based and field-based platform and was tested through a series of games. Watkins-Ball wanted to ensure he understood the consumer protection risks around offering digital credit products. Risks such as a borrower's ability to repay, transparency issues and a lack of initial understanding of costs were key concerns in his mind. In 2016, JUMO participated in additional experiments, including two 'Smart Assessment' experiments with LeapFrogLabs. One assessment focussed on Tanzania and one on Kenya to test various factors of digital credit products. For instance, the marketing, design, lending algorithm, communication methods, the customer service model and more[xix]. With these experiments Watkins-Ball was able to better understand and adapt his platform, ensuring consumer protection standards for digital financing products were met. These experiments helped create a win-win situation for both the lender and the borrower.

"*Our work breaks new ground by including many customers that have never accessed formal financial services before. This is exciting, but also means we have a significant responsibility to make sure their first formal financial services experience is positive and empowering. That's really important to us, so we're open to testing, learning, sharing and collaborating – it's a part of our contribution to building the digital financial services ecosystem.*"

– Buhle Goslar, 2016 Director of Customer Intelligence, JUMO[xx]

JUMO's focus on these various aspects such as UX, customer protection and having a robust proven algorithm contributed largely to its success. However, it was its partnership network which provided JUMO with the roads to access new markets and solidify its market position.

*Building a Partnership Network*

Operating through a partnership model is a complicated process, there are many moving parts and collaborating with partners is not always successful. JUMO managed to master this complexity of working with large organisations which brought the benefits of more revenue and greater distribution of its products, especially when collaborating with the telcos which had a vast and growing reach due to the increasing mobile phone penetration rates. Telcos had a significant impact on the financial inclusion issue, contrary to previous efforts by bricks and mortar banks whose advancement in the continent was limited by the high costs incurred for building bank branches, expanding ATM networks and running physical branches[xxi]. As JUMO infiltrated different markets over the years, introducing new loan and savings products, it worked with different telcos and finance providers in each country and continued to expand its partnership network. With this JUMO became more of a market construct by dealing in all things non-tangible, enabling the financial service offerings of its partners, just as Watkins-Ball had intended. Its partnerships with large telcos such as Airtel and MTN and inter-regional banks such as Absa spanned across numerous countries, deepening their relationships and solidifying their position within the diverse ecosystem. One of the first deals in JUMO's history was the Nivushe loan product which it introduced to the Tanzanian market in 2015 by partnering with the telco Tigo Tanzania and Absa bank (see **Exhibit 4** for a list of JUMO's product launches). That same year it launched Timiza Wakala Loans, through a partnership with the telco Airtel Tanzania. This product provided Airtel money agents with approximately 20,000 loans ranging from $23 to $229. After just two years in Tanzania, JUMO managed to capture a large portion of the market with 70% of credit transactions in the country facilitated by the JUMO platform infrastructure[xxii]. Watkins-Ball believed this vast uptake in the digital finance product highlighted the strong underlying demand constricted by the prevalent lack of trust from African consumers in banks, which prevents the improvement of financial inclusion.

JUMO first made strides towards the Kenyan market in 2016 with KopaCash, a mobile application developed in partnership with Airtel. Thereafter the next market JUMO entered was Ghana. There it introduced the country's first short-term, small-scale mobile loan, with offerings based on a 30-day term and that range from 25 to 1000 Ghanaian cedi (GHS). The product was called QWIKLOAN and was created in partnership with telco MTN Ghana and Letshego Ghana Bank (see **Exhibit 3** for an infographic on this product). The partnership was very successful, having issued over 5 million QWIKLOANS at the value of approximately GHS600 million, $98.14 million[xxiii].

Watkins-Ball knew that managing these partner relationships was crucial to ensuring JUMO's smooth expansion into new markets. He was aware of the challenges of people management problems while working to assemble technical teams and integrating staff in different markets. What made these partnerships more complex was the fact that banks and telcos tended to compete with one another to be at the forefront of SSA's large mobile money deals. Mobile money products leveraged either a bank-led or telco-led business model, nudging telcos and banks into rivalry which brought more complexity for JUMO's partnership business model.

## Early-Stage Funding

After JUMO branched off from AfB, it saw its first Seed funding come from the Anthemis Group and LeapFrog Investments in 2014 (see **Exhibit 5.1** for a funding breakdown and **Exhibit 5.2** for investor profiles). This funding allowed JUMO to operate on its own without needing the support of AfB's financial and infrastructural resources. Thereafter JUMO attracted the likes of Vostock Emerging Finance (VEF), which invested in various rounds. The first round came in on the 22nd of October 2015 at $4 million and the second on the 18th of December 2015 at $6 million. VEF invested again in 2016 and 2018.

*"Integrating with eMoney operators has allowed JUMO rapid scalability and exceptional segment reach. JUMO's unique partnership business model has created a one-of-kind ecosystem that delivers value to all stakeholders.*" – Dave Nangle, 2021 CEO, VEF[xxiv]

## The Golden Year of 2017

The year 2017 was a stellar year for JUMO. They had reached 100 million users, won the Mastercard Foundation Clients at the Centre Prize, won the Apps Changing Africa Award and were selected to be one of five participants in Google's Launchpad Accelerator programme (see **Exhibit 6** for JUMO's milestones). The Mastercard Foundation awarded JUMO with a prize of $150,000. It honoured those companies which excelled in creating financial services at scale with low-cost offerings targeting poorer demographics. JUMO was selected out of 100 companies which applied that year. Thereafter Watkins-Ball and his team were invited to travel to Accra, Ghana for the 2017 Symposium on Financial Inclusion. Earlier that year JUMO took part in Google's Launchpad Accelerator programme which brought a total investment of $50,000. JUMO was the only South African startup selected by the accelerator and invited to attend a two-week bootcamp at Google's California Headquarters and a six-month mentorship programme where the JUMO team would receive training and support from leading Silicon Valley venture capitalists (VCs). 2017 also brought the first debt financing round for JUMO, the loan facility was arranged by the investment management company Gemcorp Capital for a total of $24 million with $6 million coming from the Finnish Fund for Industrial Cooperation Ltd. (Finnfund), which focussed on developmental initiatives and aimed to achieve great social impact. The facility helped fund JUMO's further expansion in Africa and Asia. Watkins-Ball felt the partnership with the developmental organisation was a great fit for JUMO's mission and now with a perfected platform and business model, JUMO was ready for new markets.

## Two Record Funding Rounds

By 2018, JUMO had expanded to markets including Kenya, Tanzania, Ghana, Uganda and Zambia. Watkins-Ball even took the company to Asia, expanding to Pakistan in 2018. That same year JUMO began a series of VC rounds, starting with $3 million from PROPARCO. A few months later JUMO closed a $52 million round, led by Goldman Sachs.

"*There is immense opportunity across Africa and beyond for Jumo to build on their successful track record developing digital marketplace infrastructure to offer mobile subscribers access to relevant financial products.*"– Jules Frebault, Executive Director, Goldman Sachs[xxv]

This round attracted five returning investors, namely LeapFrog Investments, Gemcorp Capital, VEF, PROPARCO and Finnfund. Three months later Odey Asset Management invested $12.5

million. These funds supported JUMO's continued expansion efforts in Asia. JUMO's second record funding round was held in February 2020. This late-stage VC round brought in $55 million with investors such as Goldman Sachs, LeapFrog Investments and Odey Asset Management once again investing into the future of JUMO. With the support of these numerous rounds, JUMO was able to expand its operations to six markets and set up JUMO hubs in Cape Town, Delhi, London, Mumbai, Nairobi, Porto and Singapore.

## JUMOnaughts

JUMO's successful expansion strategy was supported by its unique workforce which Watkins-Ball called "JUMOnaughts". Having started with a team of 7 employees, JUMO grew to having more than 197 employees in 2016 and aimed to increase this figure to around 500 by 2019[xxvi]. For JUMO to succeed Watkins-Ball knew that he needed the support of not only highly skilled engineers but also leaders who inspire (see **Exhibit 7** for JUMO's leadership). As they worked through the early-stage challenges of proving the concept and achieving product-market fit in multiple countries, Watkins-Ball remarked that the process felt like "*chewing glass*"[xxvii]. The process of working to refine their offering, reducing costs to make products more accessible to end-consumers whilst also addressing the varying internal opinions was no 'walk in the park'. It required great people management and grit. It was only in 2018 and the latter part of 2019 that he felt that they finally got it 'right'. Throughout the journey Watkins-Ball made sure to invest in JUMO's governance and culture of 'JUMOnaughts'. He made it his mission to recruit the best, a key challenge in a continent which suffered from the 'brain drain' dilemma. One of his first big hires was the Chief Technology Officer (CTO) of the eBay subsidiary Magento, Ted Piertzak, who was recruited to be the Vice President of Engineering at JUMO. This also marked the first American CTO recruited by an African business[xxviii]. As JUMO grew it continued to attract key talent from the likes of Google, Amazon and General Electric, ensuring the support of a stellar workforce of inspiring leaders and technologically skilled, data wizzes.

## The African FinTech Market in 2021

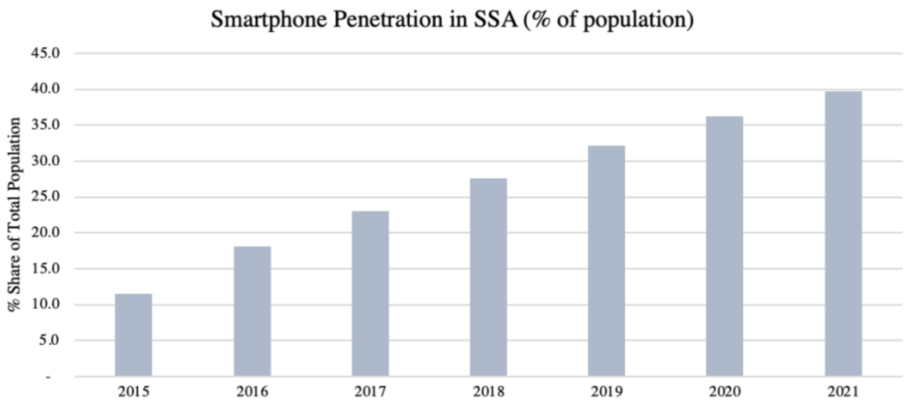
Since JUMO's founding, the FinTech market has seen great changes. Many FinTechs closed their doors after the COVID-19 pandemic. This coupled with the industry's high churn rate and consolidation trends has brought a slow-down in growth. Even so, the SSA FinTech sector has 574 active FinTech startups with a total funding amount of approximately $330 million going to 54 of these startups in 2021[xxix]. The key markets of South Africa, Nigeria and Kenya remain dominant, with Nigeria and East Africa peaking interest[xxx]. Nigerian FinTech startups received more than half of the 2021 awarded funding. The market share for South Africa, Nigeria and Kenya, is 26.7%, 25% and 16.1% respectively, whilst Ghana, Egypt and Uganda are the next key markets peaking investor interest[xxxi]. Market trends show FinTechs have increasingly expanded into multiple categories, so to 'rebundle the bank' and offer a 'one-stop-shop'. The financial inclusion issue too has improved (see **Exhibit 8.1, 8.2** & **8.3** for a 2021 snapshot).

## "And for His Next Act…"

JUMO has come quite a way since 2015, it has significantly grown its workforce, entered new markets in Africa and Asia, and won countless industry awards. Watkins-Ball sits at his office desk and lets out a breath he felt he has been holding for five years. He has been unwavered in his efforts and determination to lead JUMO to success. He currently lives in Singapore with his wife and four children where he continues to tackle the financial inclusion problem and push JUMO into new international markets. Sitting back in his chair, he can't help but smile today – JUMO has managed to close a $120 million funding round. Its largest round yet. He considers the current FinTech market and asks himself what needs to be done. Where should he go next? Will JUMO's business model continue to work in new markets? What challenges lie in his way? Should he plan for further product adaptations? Should he be expanding into other categories? These are just a few of the questions in his mind.

## Case Study Exhibits

**Exhibit 1:** Mobile Phone Penetration Rates in SSA 2015-2021



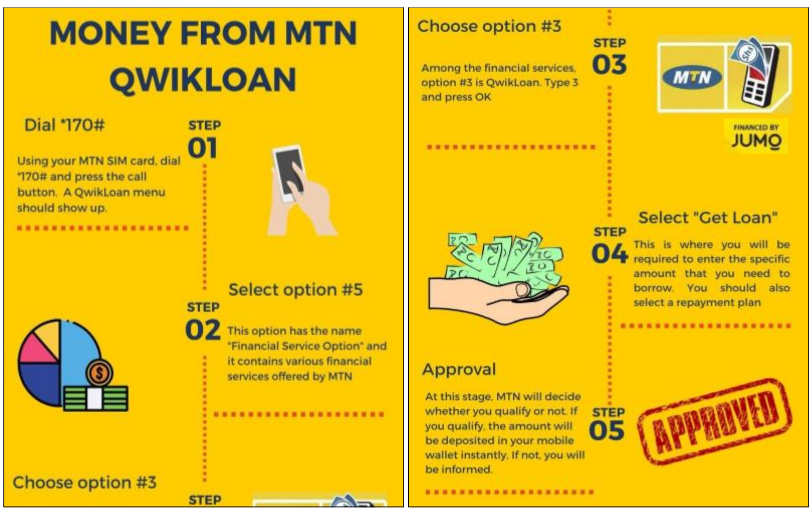

Source: Statista

**Exhibit 2:** SSA Key Market Indicators 2015-2021

| SSA Market Indicators 2015-2021 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Indicator** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** |
| Population (millions) | 1,034.6 | 1,061.1 | 1,088.1 | 1,115.5 | 1,143.2 | 1,171.2 | 1,199.4 |
| Smartphone Penetration (% of population) | 11.5 | 18.1 | 23.0 | 27.6 | 32.2 | 36.2 | 39.8 |
| Bank Account Penetration (% of Adults) | 34.6 | 36.9 | 39.4 | 41.8 | 44.4 | 46.9 | 49.5 |
| Credit Card Penetration (% of Adults) | 0.9 | 0.9 | 1.0 | 1.2 | 1.3 | 1.4 | 1.6 |
| Debit Card Penetration (% of Adults) | 6.4 | 6.8 | 7.4 | 7.9 | 8.5 | 9.2 | 9.9 |
| Online Banking Penetration (% of population) | 0.7 | 0.9 | 1.2 | 1.4 | 1.8 | 2.2 | 2.7 |

Source: Statista

**Exhibit 3:** Infographic on the Product QWIKLOAN, Developed in Partnership with JUMO, MTN and Letshego Bank in Ghana




Source: MTN Ghana

## **Exhibit 4:** JUMO's Product Launches

**JUMO's Product 2015-2021**

| Date | Type | Product Name | Partner | Country | Description |
|---|---|---|---|---|---|
| 2015 | Loan | Nivushe | Tigo & Absa | Tanzania | The Tigo Nivushe service is a micro-loan business launched in 2015 targeting unbanked consumers who lack access to formal credit. |
| 2015 | Loan | TIMIZA | Airtel | Tanzania | The Timiza Wakala loans were launched in 2015 as a service which provides micro loans to over 20,000 Airtel Money agents. The loans ranged from TZS 50,000 to TZS 500,000 (approx.US$22 to US$216). |
| 2016 | Loan | KopaCash | Airtel | Kenya | Mirco-loan offered through a partnership between JUMO and telco company Airtel. Launched as a mobile application. |
| 2016 | Loan | QWIKLOAN | MTN & Letshego Bank | Ghana | The first micro, short-term (30-day) mobile loan offered in Ghana. This partnership issued more than 5 million Qwikloans, with a value of over GHS600million. Loans range from GHS25 to GHS1,000. |
| 2017 | Loan | Wewole | Airtel | Uganda | A micro-credit product offered to Airtel mobile clients and Airtel agents of the Airtel Money platform. |
| 2017 | Loan | Na Sova | Airtel | Zambia | A short-term mobile loan offered through Airtel mobile network by USSD technology. Clients can apply for larger loan amounts based on their JUMO score. |
| 2018 | Loan | Easypaisa | Telenor & Telenor Microfinance Bank | Pakistan | Easypaisa Loan was launched by Telenor Microfinance Bank Government of Pakistan's 2015 National Financial Inclusion Strategy as well as the Strategic Goals of SBP's vision 2020. The country's first digital mano loan. |
| 2018 | Savings | TIMIZA Akiba | Airtel & Absa | Tanzania | A mobile savings product offered to Airtel Mobile Money customers. TIMISA Akiba is a fee-free product which also gives customers a monthly reward for the act of saving promoting financial education and a saving culture. |
| 2019 | Loan | XpressLoan | MTN & Ecobank | Ghana | A micro-loan product offered by USSD. This partnership approved 3 million micro-loans worth a total worth of $150 million, going to 1 million MTN Mobile Money wallet holders. |
| 2019 | Loan | KASAKA Loans | MTN & Absa | Zambia | A short-term mobile savings product launched by JUMO, Barclays Bank Zambia and MTN subsidiary MTN MoMo (Mobile Money). Built to be easy to use and understand, aims to enhance the financial literacy and savings culture in Zambia. |
| 2019 | Savings | KASAKA Savings | MTN & Absa | Zambia | A short-term mobile saving product offered in a partnership involving MTN Zambia, Barclays Zambia and JUMO. |
| 2020 | Loan | Ahomka | MTN & Absa | Ghana | A new loan scheme offering on-demand micro, short-term loans to MTN clients. |
| 2021 | Loan | VitKash | MTN & MANSA BANK | Côte d'Ivoire | A micro, short-term loan product offered in partnership with MTN and Mansa Bank, targeting entrepreneurs and small businesses which lack access to finances and financial records. |
| 2021 | Loan | Nivushe | Tigo & Absa | Tanzania | A short-term, micro mobile loan product offered to Tigo Pesa customers and funded by Absa Bank. Loan amounts ranged from TZS 2,000 to TZS 1,000,000 depending on customer requirements and JUMO score. |

Source: JUMO Press Kit 2020

## **Exhibit 5.1:** Funding Breakdown

**Funding Rounds**

| Date | Funding Type | No. of Investors | Amount Raised | Investors |
|---|---|---|---|---|
| 08-Nov-21 | Later Stage VC | 3 | $120,000,000 | Fidelity Management & Research Company, Visa, Kingsway Capital |
| 26-Feb-20 | Early Stage VC | 3 | $55,000,000 | Goldman Sachs, Odey Asset Management, LeapFrog Investments |
| 13-Dec-18 | Early Stage VC | 1 | $12,500,000 | Odey Asset Management |
| 24-Aug-18 | Early Stage VC | 6 | $52,000,000 | Goldman Sachs, VEF (Vostock Emerging Finance), PROPARCO, LeapFrog Investments, Gemcorp Capital, Finnfund |
| 10-Apr-18 | Late Stage VC | 3 | $3,000,000 | PROPARCO |
| 11-Nov-17 | Grant | 1 | $150,000 | The Mastercard Foundation |
| 07-Nov-17 | Debt Financing | 1 | $24,000,000 | Finnfund, Gemcorp Capital |
| 23-May-17 | Accelerator/Incubator | 1 | $50,000 | Google Launchpad Accelerator |
| 31-Dec-16 | Early Stage VC | 1 | $1,600,000 | VEF |
| 18-Dec-15 | Early Stage VC | 1 | $6,000,000 | VEF |
| 22-Oct-15 | Early Stage VC | 1 | $4,000,000 | VEF |
| 26-Feb-15 | Early Stage VC | 1 | $25,000,000 | LeapFrog Investments |
| 20-Jan-14 | Seed Round | 1 | $16,000,000 | LeapFrog Investments, Anthemis Group |
| **Total Funding** | | | **$319,300,000** | |

Source: Adapted from Pitchbook database

**Exhibit 5.2:** Investor Profiles

***Goldman Sachs*** is a world leading bank headquartered in New York, USA which provides a variety of financial services such as investment banking, investment management, wealth management and advisory services, securities underwriting, asset management and prime brokerage.

***Odey Asset Management*** *is* a small boutique asset management company based in London. The firm works with institutional investors, family offices and private banks, managing their assets and portfolios.

***Vostok Emerging Finance (VEF)*** is an investment firm which specialises in early-stage financial services companies (FinTechs) which operate in emerging markets.

***PROPARCO*** is a subsidiary of the French Development Agency, Groupe Agence Française de Développement (AFD). It is owned partly by AFD as well as by private and public investors such as ethical funds and service companies. As a development finance institution it aims to facilitate private investment in Africa, Latin America, Asia and the Middle East as part of its mission to support the Sustainable Development Goals (SDGs).

***The Mastercard Foundation*** is a charitable foundation which aims to promote learning and financial inclusion in areas of poverty. It was founded in 2006 by Mastercard International and primary operates in Africa, helping to enhance the lives of people in developing countries. To date the foundation has received approximately $4.4 billion in funding in order to fulfill its mission to serve the underserved.

***The Finnfund*** is a Finnish development fund which is backed by the State of Finland as well as private capital market investors. It aims to promote sustainability in the world by supporting developing countries. Key industries which the fund has been known to invest in include Financial Services, Clean Energy, Sustainable Forestry and Sustainable Agriculture.

***Google Launchpad Accelerator*** is a 6 month accelerator programme which equips chosen startups with the necessary skills and knowledge to succeed in their marketplaces. The programme offers resources and collaboration opportunities with Google and mentorship with some of Silicone Valley's best Venture Capitalists. As part of the programme selected startups are also invited to a 2 week bootcamp at the Google headquarters in California.

***LeapFrog Investments*** is an independent investment firm which specialises in high-growth companies operating in the Financial Services and Healthcare sectors. The firm has successfully received over $2 billion in funding from investors worldwide.

***Gemcorp Capital*** is an independent nvestment management company which specialises in emerging markets, investing in high-growth companies. The firm aims to find the 'hidden gem' opportunities in emerging markets and bring these ideas to fruition in order to deliver value to its investors.

***The Anthemis Group*** was founded in 2013 as a private equity and venture capital firm focussing on the financial services and technology sectors. The firm aims to invest in high-growth companies worldwide, guiding those companies in its portfolio to success.

***Fidelity Management & Research Company*** is a multinational financial services firm headquartered in Boston, Massachusetts. It has $4.9 trillion AUM and exists as one of the largest asset managers in the world. The firm provides a variety of services including brokerage services, management of mutual funds, investment advice, wealth management as well as securities-based services.

***Visa*** is a global leading financial services company which has long been dedicated to the causes of financial inclusion, sustainability and equality. By providing the necessary resources, tools, networks and promoting skill buidling, Visa helps small and micro businesses to grow and make a difference in the economy.

***Kingsway Capital*** is an independent investment management firm based in London. The firm specialises in the financial and consumer franchise sectors, investing in promising companies.

Source: Revised from the various company websites

**Exhibit 6:** JUMO's Milestones

| **Milestones** | |
|---|---|
| **Date** | **Event** |
| Jan-15 | JUMO founded by Andrew Watkins-Ball with the aim of enhancing the financial choices given to unbanked consumers in emerging markets |
| Oct-15 | The first partnerships were formed with Airtel, Tigo and MTN, which worked to bring loan products to the unbanked populations in Kenya, Uganda and Zambia |
| Dec-16 | Secured Letshego Bank in Ghana as JUMO's first funding partner, together they would build a partnership ecosystem with capital and payment providers to deliver new financial products and solutions to consumers |
| Dec-16 | The JUMO team went from 112 members to 197, significantly growing its engineering department by adding more technical talent |
| Nov-17 | Selected as the winner of the Mastercard Foundation Clients Award at the Centre Prize, being recognised for bringing great value to its partners |
| May-17 | Selected to take part in the Google Launchpad Accelerator programme |
| Nov-17 | JUMO won the Apps Changing Africa Award |
| Sep-18 | Closed a $52 million funding round led by Goldman Sachs and other investors including PROPARCO, FinnFund, LeapFrog Investments, Gemcorp Capital and VEF |
| Dec-18 | Gained an additional $12.5 million investment from Odey Asset Management |
| Sep-18 | Entered into a partnership with Telenor and Telenor Microfinance bank to launch products in Asia |
| Sep-18 | Launched JUMO Drive, a digital financial product for rideshare drivers |
| Jan-19 | JUMO was recognised by the London Stock Exchange Group (LSEG) as one of the top 360 companies in Africa to inspire in 2019 |
| Jan-19 | Selected to take part in the Google Launchpad Studio |
| Apr-19 | Won the Customer Alignmnt Award in San Fransisco at the LendIt FinTech event |
| Oct-19 | Received the Gold Award within the Responsible Digital Innovator of the Year category during the Global SME Finance Forum Awards in Amsterdam |
| Nov-19 | JUMO celebrates reaching the milestone of having 15 million customers in Africa and Asia combined |
| Feb-20 | Closed a $55 million funding round, led by Goldman Sachs, Odey Asset Management and LeapFrog Investments |
| Feb-20 | Recognised by Fast Company SA as a leader in innovation, giving praise to its capabilities in machine learning and advanced data science |
| Apr-20 | Grew its savings product launched in partership with Timiza Akiba by 30% in 3 months during the pressing times of COVID-19 |
| Nov-20 | Was awarded the Platinum Award for the Responsible Digital Innovator of the Year category and the Silver Award for the Product Innovation of the Year category at the Global SME Finance Forum Awards |
| Oct-21 | Awarded the Silver Award for the Responsible Digital Innovator of the Year category at the Global SME Finance Forum Awards |
| 2021 | Closed a $120 million funding round led by Fidelity Management & Research Company, Visa and Kingsway Capital |

Source: JUMO Press Kit 2020

## **Exhibit 7:** Profiles on JUMO's Leadership Members

**JUMO's Key Leaders**

| Team Member | Role | Background/Profile |
|---|---|---|
| Andrew Watkins-Ball | Founder & Group CEO | Watkins-Ball is a South African-born entrepreneur who currently lives in Singapore with his wife and 4 children. He made his start to his career working for Saloman Brothers in London and New York. After finishing high school in South Africa, Watkins-Ball studied software engineering and went on to found numerous ventures including a satelite service provider Gateway Telecommunications which Watkins-Ball sold to Vodacom for $675 million in 2008. Since then he founded JUMO and as the CEO has focussed on leading the company to success in new markets. |
| Buhle Goslar | Africa CEO | Goslar has been with JUMO since 2016, she began as the Director of Customer Intelligence, then became the Chief Customer & Sustainabiliy Officer, followed by the CEO of Africa Regions & Pakistan and her current position held is the CEO of Growth & New Markets. Goslar has a rich background in marketing, customer experience, product and brand management as well as business strategy. She has worked for Woolworths, Barclays Wealth (SA), Investec and African Eagle. She has completed numerous university courses at the University of Witswatersrand, University of South Africa and has an MBA from the University of Cape Town. Goslar was also honoured as one of South Africa's 'Inspiring Fifty' women 2021. |
| Martin-Munjo Vogdt | Chief Product & Group Head of Trading | Vogdt has worked for JUMO for almost 6 years, having joined the team in 2016 at a similar time to Goslar. His previous work experience includes being the Head of User Experience at the internet Incubator Rocket Internet SE, CEO of Zando which forms part of the leading digital retail group Jumia and Head of Design & UX at Africa Internet Accelerators (Naspers). These experiences made him a the right person to enhance JUMO's user experience and product development in new markets. |
| Paul Whelpton | Chief Analytics Officer | Whelpton studied at the University of Pretoria in South Africa where he completed a Bachelors in Commerce with a focus on Informatics. He made his start to his career at Standard Bank where he worked as a Senior Manger in the Analytics Division. Thereafter he became the Head of Enablement Analytics at the bank and in 2015 became the Executive Head in Customer Pricing. He also completed his MBA in 2015 at the Gordon Institute of Business Science. Whelpton started with JUMO in May 2017 as a Global Head of Portfolio Strategy, a role which he performed for approximately one year before being promoted to Chief Analytics Officer and Group Head of Trading, which he has done for almost 4 years. |
| Chris Halbert | Interim/Deputy CFO | Halbert joined JUMO in 2015 as the Director of Financial Strategy. He has a background in Financial management, having worked as a Financial Accountant from 2000-2005 at Hays PLC in London, Group Financial Manager in 2006 of a startup loan provider in Cape Town called Integar, Group Financial Manager/Regional Operations Manager at Alliance Group Capital in Cape Town and a Group Financial Manager at AfB which eventually spun off into numerous individual businesses one of which became JUMO. During his role at AfB and his first role at JUMO Halbert was responsible for the reporting function of the companies. In 2017 he went on to become JUMO's Group Financial Director/Deputy CFO, responsible for developing Financial Planning & Analysis functions as well as is an invited member of the Board and Audit & Risk Committee. His current role at JUMO is as Interim CFO. |
| Susie Squire | Chief Officer and People Officer | Squire is currently responsible for the managing the public relations of JUMO and makes it her own personal mission to create a unique work culture at JUMO. She has come from a diverse and impressive employement background. Having begun as a Features Writer and Editor at Condé Nast International in 2005, Squire went on to work for Stockholm Network Limited as a Network Development Manager and after that became a Political Director at TaxPayers Alliance in 2008, a Special Adviser to Secretary of State for Work and Pensions Iane Duncan Smith and the Head of Press at the Conservative Party. Thereafter, Squire fulfilled the much acclaimed role at the Press Sectretary to the UK Prime Minister at 10 Downing Street in 2012. Before starting with JUMO in 2019, Squire was working for Woolworths in Cape Town, South Africa as the Head of Corporate Communications & PR and the Group Head of Communications thereafter. |

Source: Revised from JUMO company website

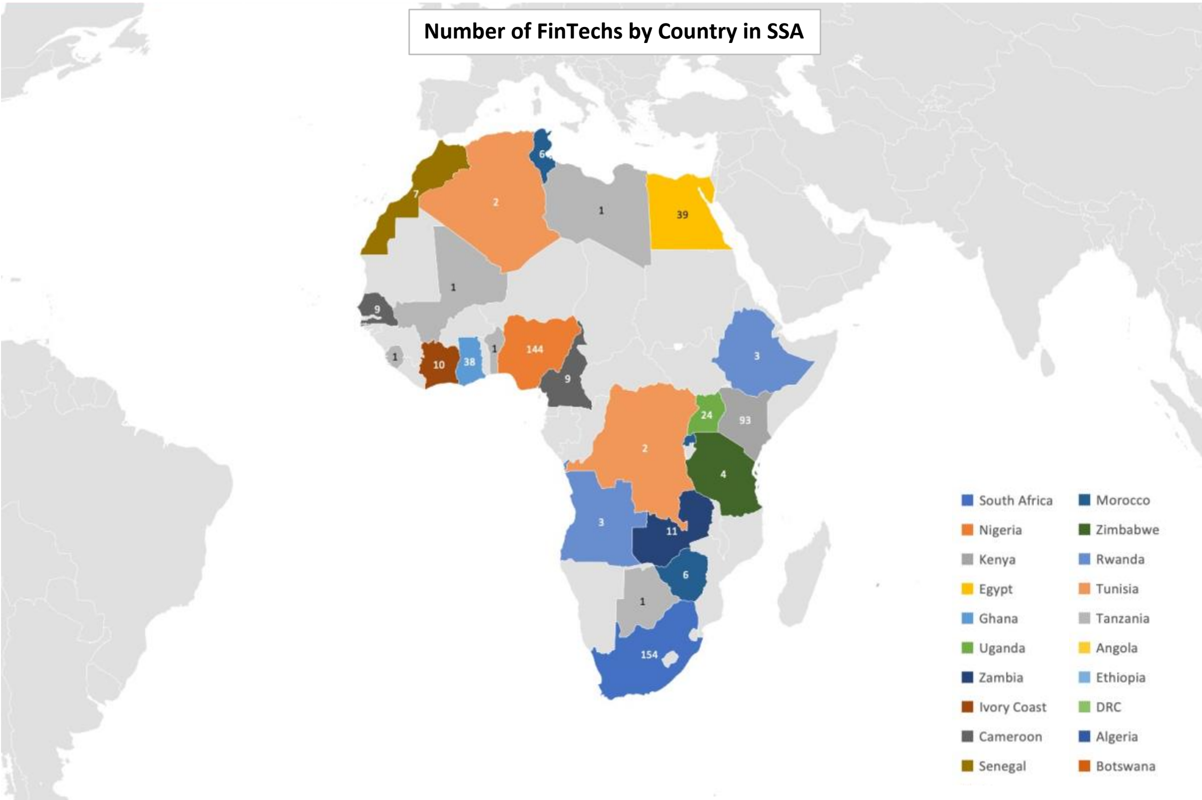
## **Exhibit 8.1:** 2021 SSA FinTech Market

**Total Funding for African FinTechs 2015-2021**

| Country | No. of Rounds | Funding Amount |
|---|---|---|
| Nigeria | 108 | $476,901,000 |
| South Africa | 128 | $216,124,800 |
| Kenya | 52 | $85,990,000 |
| Egypt | 35 | $44,400,000 |
| Tunisia | 6 | $26,047,000 |
| Uganda | 12 | $7,136,665 |
| Ghana | 15 | $3,520,000 |

Source: Revised from Disrupt Africa, Finnovating for Africa 2021 Report

**Exhibit 8.2:** 2021 SSA FinTech Market




Source: Revised from Finnovating for Africa 2021 Report

**Exhibit 8.3:** 2021 SSA FinTech Market

| Breakdown of FinTechs in SSA | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Country | Payment & Remittances | Lending & Financing | Business Admin | Insurtech | Investtech | Personal Finance | Blockchain | Security & ID | Financial Education |
| South Africa | | 32 | 26 | 30 | 19 | 12 | 13 | 8 | 1 |
| Nigeria | | 36 | 21 | 4 | 31 | 17 | 11 | 8 | 1 |
| Kenya | 32 | 27 | 26 | 15 | 5 | 4 | 7 | 3 | 2 |
| Egypt | 17 | 9 | 10 | 1 | 3 | 3 | | | 1 |
| Ghana | 13 | 9 | 9 | 1 | 5 | 4 | 5 | 3 | |
| Uganda | 11 | 11 | 1 | | 3 | 2 | | | |
| Zambia | 7 | 5 | 1 | | 1 | 1 | | | |
| Ivory Coast | 7 | | 6 | 1 | | | | | |
| Cameroon | 5 | | 3 | | 1 | 1 | | | |
| Senegal | 7 | | 4 | | 1 | | | | |
| Morocco | 3 | | 3 | | | | 1 | | |
| Zimbabwe | 3 | | | 1 | 3 | | 3 | | 1 |
| Rwanda | 2 | | 2 | | | 2 | 1 | | |
| Tunisia | 2 | | 2 | 1 | 1 | | 1 | | |
| Tanzania | 2 | | 1 | 1 | | 1 | | | |
| Angola | 2 | | | | 1 | | | | |
| Ethiopia | 2 | | 1 | | | | | | |
| DRC | 2 | | 1 | | | | | | |
| Algeria | | | | | 2 | | | | |
| Botswana | | | | 1 | | | | | |
| Libya | | | | | 1 | | | | |
| Benin | | | | | | | | | |
| Sierra Leone | | | | | | | | | 1 |
| Mali | | | | 1 | | | | | |
| Mauritius | 1 | | | | | | 1 | | |
| **Total** | **118** | **129** | **117** | **57** | **77** | **47** | **43** | **22** | **7** |

Source: Adapted from Disrupt Africa, Finnovating for Africa 2021 Report

## **Exhibit 9:** Comparable Companies

*(All values in $ millions)*

**JUMO WORLD LTD INFORMATION**

| Company Name | Founding Year | HQ Location | No. Employees | Regions | No. Funding Rounds | Total Funding | Latest Round | Est. Revenue |
|---|---|---|---|---|---|---|---|---|
| JUMO World Ltd. | 2015 | Cape Town, South Africa | 350 | South Africa, Ghana, Tanzania, Kenya, Uganda, Zambia, Pakistan, Côte d'Ivoire | 6 | 214 | Late VC (Series C) | $35 million |

*(All values in $ millions)*

**PUBLIC PEER COMPANIES**

| Company Name | Founding Year | HQ Location | No. Employees | Regions | Ticker | IPO Date | Market Cap | Revenue | Debt | Cash |
|---|---|---|---|---|---|---|---|---|---|---|
| Fawry | 2008 | Cairo, Egypt | 251-500 | Egypt | EGX:FWRY | 08/08/2019 | 1344 | 79 | 63.7 | 31.9 |
| Finbond Group | 2001 | Pretoria, South Africa | 1 290 | South Africa | JSE: FGL | 22/02/2016 | 55.5 | 119.7 | 122.2 | 58.6 |
| Transaction Capital | 2007 | Johannesburg, South Africa | 5001-10000 | South Africa | JSE:TCP | 15/06/2012 | 1876.1 | 305.6 | 1076.7 | 147.4 |
| Net 1 UEPS Technologies | 1997 | Johannesburg, South Africa | 2875 | South Africa | NASDAQ:UEPS | 19/04/1999 | 242.8 | 130.2 | 55.7 | 198.6 |
| MyBucks | 2011 | Luxembourg | 1108 | Zambia, Zimbabwe, Uganda, Botswana, Mozambique, Malawi | MBC:GR | 24/06/2016 | 4.8 | 22.6 | 178.6 | 11.7 |

*(All values in $ millions)*

**PRIVATE PEER COMPANIES**

| Company Name | Founding Year | HQ Location | No. Employees | Regions | No. Funding Rounds | Total Funding | Valuation | Latest Round |
|---|---|---|---|---|---|---|---|---|
| Yoco | 2013 | Cape Town, South Africa | 101-250 | South Africa | 6 | 106 | 341.3 | Series C |
| Opay | 2018 | Ikeja, Lagos, Nigeria | 251-500 | Nigeria, Egypt | 3 | 570 | 2034 | Series C |
| Flutterwave | 2016 | Lagos, Nigeria | 201-500 | Nigeria, Kenya, Ghana, South Africa, Uganda, Tanzania | 13 | 234.7 | 1027.2 | Series C |
| Tyme Bank | 2012 | Johannesburg, South Africa | 201-500 | South Africa | 4 | 169 | 265 | Growth EquityVC |
| Kuda | 2019 | Lagos, Nigeria | 201-500 | Nigeria | 5 | 91.5 | 514.2 | Series B |
| MFS Africa | 2009 | Johannesburg, South Africa | 101-250 | Ghana, Cameroon, Nigeria, South Africa | 4 | 117.2 | 359.9 | Debt Financing |

# Teaching Note

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AFONSO EÇA

## Synopsis

The case of *JUMO: Expanding Together* analyses the journey of the African FinTech JUMO, looking at its partnership-based approach to expansion in various markets, the impact of its products to help financial inclusion and the numerous funding rounds and accelerator programmes the company has undergone. Described as a business which enables, JUMO collaborates with partners such as local banks and telecommunications companies to introduce new financial products to unbanked consumers in numerous African countries and supports its partners with an end-to-end platform and unique algorithm for alternative credit scoring.

## Intended Audience

This case study is intended for students in courses such as FinTech, Banking, Venture Capital (VC) and Business and Strategy in Emerging Markets. FinTech and VC students are provided with insight into the growth journey of a FinTech startup, analysing how the founder and his team developed a strong proof of concept, navigated external and internal challenges and executed expansion strategies. Banking students learn of the prevalent financial inclusion issue and gain knowledge of emerging alternative credit scoring methods which banks can leverage. Lastly, Business and Strategy in Emerging Markets students are exposed to African market intricacies and how JUMO navigated institutional voids and adapted products and strategies.

## Suggested Questions and Case Analysis

1. **Evaluate the opportunity and the context – is JUMO really disrupting the market and helping to solve the key issues?**

JUMO founder Andrew Watkins-Ball saw great opportunities behind the challenges of the African market. Tackling the challenge of how to access and attract unbanked populations in Sub-Saharan Africa (SSA), JUMO leveraged the growing mobile phone penetration rates and delivered products through USSD (unstructured supplementary service data). Tackling the problem of a lack of financial data on unbanked consumers, JUMO developed a unique algorithm through machine learning and artificial intelligence (AI) which uses alternative data sources such as mobile metadata to generate credit scores. Lastly, addressing the problem of a lack of trust in the market by consumers towards banks, JUMO built a strong, genuine brand identity and focussed on user experience (UX) design, to develop an end-to-end platform which enables its partners such as telecommunications companies (telcos) and banks to offer financial services in ways which are easy to use and understand. This focus on UX allows JUMO to gain the trust needed and ultimately enhances the financial literacy of end-consumers. Given the inherent lack of trust in the marketplace and failure of banks to prioritise the user friendliness and UX of financial products offered to consumers, JUMO's role in this aspect of the market is considered to be disruptive, outshining banks. Considering the context in which JUMO operates, SSA has shown great development since JUMO's founding in 2015. Smart phone penetration has increased from 11.5% of the population in 2015 to 39.8% in 2021[xxxii], offering a new channel through which FinTechs can innovate and distribute products. In 2015, there were 15 new lending and financing FinTechs launched in SSA, most of which targeted Kenya and Uganda[xxxiii]. In 2020, despite the challenges of COVID-19 pandemic, there were 12 new FinTechs in this category, focussing more on Nigeria. Since 2015 there has been much activity within this category, though with few startups innovating in credit scoring. Instead, most startups outsource this functionality through an API (Application Programming Interface) offered by specialised FinTechs. Perhaps even more disruptive than its platform is JUMO's alternative credit scoring capability. With this offering JUMO disrupts traditional credit scoring methods used by most banks. As mentioned, in 2015 when JUMO began there were very few FinTechs doing just this, suggesting that JUMO had somewhat of a beachhead product. To date JUMO has issued 120 million loans with a value of $3.5 billion to 18 million people, making a huge impact on the financial inclusion issue in SSA. As a facilitator of financial serives company, JUMO holds an influential position in the market. Its partnership business model allows for great scalability and smooth expansion into new markets, positioning it for success and continued disruption.

**2. How does JUMO's business model work? What are the advantages and disadvantages of the partnership approach?**

JUMO's business model includes its two product offerings, its customers, called 'partners', and its partnership-based business model. Its partners are typically telcos and banks which JUMO supports with its *Core* and *Unify* products. *Core* offers partners an end-to-end banking infrastructure platform to support new financial services offerings. Here JUMO focusses on UX and end-consumer needs. *Unify* offers a unique credit scoring method which leverages alternative data sources such as mobile metadata. Together JUMO and its partners work to introduce new financial products and solutions to unbanked consumers in SSA. Its non-tangible product offerings help to position JUMO as a company which enables, aiming to be the "Amazon of financial services"[xxxiv]. JUMO's value proposition is to support partners with accessing unbanked consumers, helping to meet complex needs and ultimately to counter the financial inclusion issue. A more in-depth representation of JUMO's business model is outlined in the Business Canvas in **Exhibit 1**. A key advantage to JUMO's business model is its potential for scalability. By working with various partners in different countries, JUMO can expand rapidly and smoothly to new markets, leveraging existing market knowledge and expertise of its partners. This collaborative business model promotes synergies, sharing of resources and learning from each other which can be advantageous to overcome country-specific obstacles, to better understand consumer needs across markets and adapt product and service offerings. This model also brings opportunities for cross-selling and customer retention. As JUMO forms long-term relationships with partners it builds a rich ecosystem which can lead to repeat deals and working with partners across countries. Some disadvantages and challenges of this business model include internal operational conflicts which can arise from differing views of partners on markets, strategies, and product design. This could create tension and hinder successful delivery of business. These issues require people management skills by JUMO's leadership to incentivise parties involved and ensure alignment in visions and goals.

**3. Evaluate JUMO's execution of its business expansion strategy over the years.**

Instead of first targeting the most unbanked countries in Africa such as Nigeria, JUMO's expansion strategy followed a less structured plan, targeted markets as and when possible. Its first market was Tanzania, which Watkins-Ball today remarked was one of the hardest to launch in. Following Tanzania, JUMO expanded to Kenya, then Ghana, Uganda, Zambia and Pakistan which was its first expansion to Asia. Regarding product expansion, JUMO focussed firstly on loans then shifted to savings products, whilst also providing services in credit scoring and later fraud detection. JUMO also developed a digital financial tool for rideshare drivers called JUMO Drive. JUMO found an effective way to navigate new markets by leveraging resources and synergies of partners in its ecosystem formed through its partnership business model. Its openness to collaboration and partnerships became the 'bread and butter' and key strength in its successful business model and expansion strategy. JUMO was and is one of few FinTechs which has the skills and complexity needed to work with large organisations such as banks and telcos. Similarly, JUMO's successful execution was aided by its focus on not only its partner's needs, were it applied strong customer relationship management principles to build long-term relationships and secure future business, but also on the needs of its end-consumers who were satisfied by great UX and cost reduction. Additionally, JUMO benefitted from its strategic foresight to perfect products through experiments, ensuring compliance with regulations. Moreover, its focus on cultivating a strong organisational culture of JUMOnaughts and hiring unique, highly skilled engineers and inspiring managerial leaders supported successful execution and expansion. Even so, JUMO's decision to expand to Pakistan before targeting Africa's highly unbanked countries such as Nigeria could suggest it favours economies of scale rather than being genuine in its financial inclusion mission. This could impact brand image. Likewise, its JUMO Drive and fraud detection products, which relate less to financial inclusion, highlight a similar brand image concern. If JUMO focussed on excelling in one product for example loans, it could allocate more time and resources to becoming a leader in this category across multiple African markets and solving the financial inclusion issue. Though understandably, JUMO sought economies in other markets and products to counter the likely low margins of its low-cost loan products.

**4. Discuss JUMO's accelerator programmes. How central do you think these were to JUMO's success? Do accelerator programmes guarantee success?**

In 2017, JUMO attended Google's Launchpad Accelerator programme and received the Mastercard Foundation Client Award. In 2019 it was reinvited by Google to attend the Launchpad Studio programme. These programmes provided great opportunities to network and learn from fellow startups, mentors, venture capitalists (VCs) and the international companies themselves. During the Launchpad programme JUMO was attended a 2-week bootcamp at Google's headquarters in California where it gained exposure to a network of esteemed Silicon Valley VCs in the Technology Sector, providing valuable industry insight, knowledge and training. Thereafter, Google mentored JUMO during a six-month programme. This programme was largely influential in JUMO's success as it enabled the company to leverage Google's market leading technical knowledge to perfect its algorithms and deliver true value to consumers. The Mastercard Foundation Award, albeit not being a structured accelerator programme, brought additional funding and invited JUMO to present at the 2017 Symposium on Financial Inclusion in Accra, Ghana, which grew its business network and exposure. The

Launchpad programmes are likely to have been more impactful on JUMO's operations, strategies and value proposition given the longer-term nature and access to an expert network of VCs and industry professionals. Typically, accelerators stand out from alternative early-stage financing such as VCs, angel investors and 'FFF' as they offer collective programmes with valuable resources and mentorship. Their nature is generally intensive, short-term and based on a 'learn-by-doing' approach, which accelerates early-stage ventures. Value gained from these programmes goes beyond being a credibility signal to future investors, although they are effective in attracting seed and early-stage investors[xxxv], The impact these programmes have on startups varies depending on the programme specifics and how well it is organised. Hence, success is not guaranteed. In JUMO's case, programmes provided competitive advantages though it was still up to JUMO's leadership to execute strategies effectively and efficiently to ensure success.

**5. Would JUMO be poised for success in Nigeria from 2021 onwards, could its partnership approach support expansion here? Discuss the market as well as any regulations of this region that could possibly hinder expansion.**

Nigeria is a key market with increasing mobile phone penetration rates and regulators increasingly supporting FinTechs. Even so, it is not without its challenges. Nigeria has a below average infrastructure, unstable political and regulatory systems, high unemployment rates and low levels of economic development. Despite evolving regulators, Nigeria is one of Africa's most regulated and complex markets. High costs, a complicated loan application process and collateral requirements are all factors limiting loan issuance and financial inclusion. Nigeria fell short of Financial Inclusion Strategy 2020 goal to achieve 70% of Nigerians using formal financial services, reaching only 51%[xxxvi]. The demographic of those excluded were mainly women, rural dwellers and northern Nigerians. With 91% of Nigerians owning mobile phones in 2020, 35 million Nigerians still classified as unbanked [xxxvii], begging the question why these consumers are not using mobile money apps? This low uptake could be due to poor UX on platforms and lack of trust in financial institutions. This leaves a gap for UX specialised FinTechs such as JUMO to create easy to use products and deliver services which build trust with consumers. According to McKinsey, Nigerian consumers valued access and convenience of financial services over price and value[xxxviii]. Nigeria's two main regulators of FinTechs are the Central Bank of Nigeria (CBN) and Securities and Exchange Commission (SEC). The CBN in 2015 introduced the Guidelines on Mobile Money Services and the SEC created the FinTech and Innovation Office (FINO) which encouraged communication with FinTechs and FinTech hubs around the country. Regulatory sandboxes in Nigeria also show a progressive climate by promoting sharing and learning within the ecosystem. However, Nigeria is still considered to have a fragmented regulatory framework and tendency to introduce sudden bans without warning, for example the recent ban on cryptocurrency. This unpredictable nature creates uncertainty and can turn FinTechs away from the country. The market also shows a poor data collection culture which presents challenges for FinTechs, though regulators have begun promoting 'Open Banking' as in the EU which supports data accessibility. FinTechs wishing to operate in Nigeria should be aware of the various rules and requirements. For instance, the Data Protection Regulation of 2019 (NDPR) that introduced new data privacy and data localisation rules, as well as the Nigerian Communications Commission (NCC) which regulates mobile money operators using USSD technology and requires these entities to have a letter of approval stating their eligibility to issue USSD short codes. JUMO's partnership business model would allow it to better navigate Nigeria's regulatory requirements by leveraging resources and existing licenses of partners. JUMO could also leverage valuable insight and resources from its network of industry professionals formed during accelerator programmes. The full potential of Nigeria's market is untapped and requires large investment to cater to the mass market and significantly combat financial inclusion issues. FinTechs alone do not have sufficient funding for this scale of change. COVID-19 did bring some change by influencing higher online channel purchases and use of mobile financial services[xxxix]. Nigeria is a key market for JUMO, and with its strengths and partnerships JUMO is well-positioned.

**6. Drawing on data in Exhibit 9, derive a valuation for JUMO using both multiples and a VC style valuation approach. Compare and comment on the two outcomes.**

Through a multiples approach, public peer companies were analysed and used to gain an Enterprise Value (EV) /Revenue multiple which could be applied to JUMO. The resulting valuation was $253.6 million (see **Exhibit 2.1**). Through a VC style approach, industry valuations of private peer companies were leveraged to estimate an EV for JUMO. The resulting valuation was $756.9 million (see **Exhibit 2.2**). Comparable public and private company peers were of similar size to JUMO in terms of employees, had similar HQ locations and operated in similar geographic regions. Furthermore, private peers showed similarities in funding stages, funding types and total funding amounts received. These similarities help ensure a more appropriate comparison and hence a more appropriate valuation for JUMO. Even so, the discrepancy between these two valuation methods is $503.3 million. A limitation of VC valuation methodologies is the ignorance of risks which may be inherent in the company and market. These methods tend to price companies based simply on the prices given to other FinTechs by the market. If a market faces overvaluation this could influence the results of this comparable valuation. The African market arguably shows evidence of overvaluation, with overly interested international investors. Recent reports also show the number of startup unicorns in the continent have doubled this year[xl]. This extreme statistic raises questions around inflated valuations in the marketplace. A multiples approach is a useful valuation metric for instance when valuing a startup which has negative earnings. This method however ignores the growth aspect of companies which is crucial in the FinTech sector and highly influential on a company's potential valuation in the eyes of investors. Combining valuation methodologies is known to improve results, in this case the VC method brings accountability for growth and captures the premiums investors paid for the growth potential of peer FinTechs. Whilst the multiples approach is based on fundamentals such as market value and EV. The average valuation of the two methods is $505.2 million. A limitation to this analysis is JUMO's estimated revenue figure which likely increases the discrepancy.

7. **Explain the venture debt deal. Was it clever to raise debt at a time? What are the characteristics of this funding type? How does this affect other equity investors?**

A venture debt deal raises funding from debt instruments such as non-convertible debentures (NCDs). NDCs are coupon bearing instruments which are paid by the borrower to the lender. This instrument includes equity warrants which give the lender the right but not the obligation to obtain equity in the venture at a certain price and time. Debt deals can be used as a strategic tool to complement equity financing to bring in new capital whilst also preventing further dilution of equity for founders and investors. Debt also helps early-stage ventures build a good credit score and business reputation, aiding future bank loan applications. Additionally, venture debt can provide financing for working capital needs, capital expenditure for business expansion, and can be used in-between equity rounds to extend the venture's capital raising horizon. This financing should be avoided by high-risk firms with high cash burn and high growth prospects. Venture debt increases risks for the firm through heightened bankruptcy risk and the burden of interest payments. In JUMO's case, the $24 million debt deal is likely to have influenced sentiments of existing investors Anthemis, VEF and LeapFrog Investments. Concerned about the added risk and their positions in the company, investors may suggest covenants to restrict external financing. To manage this JUMO should align incentives of parties and address asymmetric expectations. Considering the timing of JUMO's debt round, a year and a half after its previous round, it was likely used as bridge financing to allow JUMO to pay for short-term expenses until new longer-term financing came. Debt financing often occurs after early equity investors such as angels, VCs and 'FFF' (family, friends and fools). Thus, JUMO's debt round arguably occurred at a reasonable time.

## 8. Why aren't we seeing JUMOs business model, specifically credit scoring based on mobile data, being replicated in Europe or US?

Credit scoring helps reduce the costs credit decisions and determine minimum economic and regulatory capital requirements for financial institutions. US and EU financial systems rely on traditional credit scoring methods such as statistical decision-making techniques, leveraging banking and financial data from credit cards and loans. However, with the growing availability and variety of data, alternative credit scoring (ACS) has emerged which leverages alternative data sources, machine learning and artificial intelligence to analyse data through algorithms to predict credit scores. ACS has been influential in emerging markets to create credit scores for unbanked consumers lacking financial data. JUMO does this by using mobile metadata such as number of calls made per day. ACS not only benefits emerging markets but can also compliment traditional scoring methods, adding robustness. Hence, why is ACS not more prevalent in the EU and US, especially considering the majority of unbanked populations in these regions and the EU's key challenges around limited transferability of credit scores between countries leading to high loan rejection rates. The EU's unbanked populations include Romania with 42% of the population classifying as unbanked, Turkey 31%, Bulgaria 28%, Hungary 25%, Czech Republic 19%, Lithuania 17%, Greece 15%. The US too has 7% unbanked[xli]. As consumer behaviour changes constantly, credit scoring methods should be updated regularly to remain accurate and reliable. The US is notoriously slow to implement such changes[xlii]. In EU, the slower adoption of ACS could be due to data privacy concerns and fragmented regulations, differing by country[xliii]. In 2019, the EU launched PSD2 to combat fragmentation with 'Open Banking', creating a single payment market and making data more accessible[xliv]. ACS is in infancy in these markets though Basel IV could bring a shift soon[xlv].

# Teaching Note Exhibits

## **Exhibit 1**: JUMO Business Canvas

**Key Partners**

- Large telco companies in various African countries (Airtel, MTN)
- African banks such as Letshego Bank in Ghana, Absa, MANSA Bank, Telenor Microfinance Bank
- Personal network of investors, & business contacts

**Key Activities**

- Form new partnerships with banks and telcos to offer financial products to new markets
- Data collection using alternative sources (mobile metadata) to feed algorithms for credit scoring
- Optimize user experience for consumers using its platform

**Key Resources**

- Human Capital:
  - Founder Watkins-Ball and team of engineers and managers
- Resources and mentorship from accelerator programmes

**Value Proposition**

- Facilitating the introduction of financial products to unbanked consumers in new markets by working with partners such as banks and telcos
- To provide a solution to generating a credit score for unbanked consumers who lack financial records and data

**Customer Relation**

- Long-term relationships formed by building a strong ecosystem of partnerships across countries
- Relationships strengthened through social media channels and talk events

**Customer Segments**

- B2B (partners) and B2C companies
- Banks and telcos
- End user of financial products (typically the unbanked consumers in Africa)

**Channels**

- Financial products offered through USSD technology, leveraging the networks of telecommunications providers
- New partnerships sourced from channels including JUMO's ecosystem, word-of-mouth, online, accelerator programmes, industry events (SME Finance Forum, 2017 Financial Inclusion Symposium in Ghana)

**Cost Structure**

- Development costs and technological infrastructure
- Implementation costs
- Costs relating to regulatory administration tasks in the various countries

**Revenue Stream**

- Fees for providing credit scoring services
- Commission revenue from partnership products
- Fees from consultative work performed on creating a unique customer experience for partnership products
- Revenue from services provided to clients through JUMO's end-to-end platform

## **Exhibit 2.1 & 2.2:** Multiples & VC Style Valuations

*(All values in $ millions)*

| Company Name | Revenue |
|---|---|
| **JUMO World Ltd** | 35 |

| 2.1 Multiples Valuation | | | | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Market Cap** | **EV** | **Revenue** | **EV/Revenue** |
| Fawry | EGX:FWRY | 1,323 | 1,375.8 | 77.8 | 17.4x |
| Finbond Group | JSE: FGL | 56.4 | 119.1 | 121.6 | 1x |
| Net 1 UEPS Technologies | NASDAQ:UEPS | 242.8 | 99.9 | 130.2 | 0.8x |
| Transaction Capital | JSE:TCP | 1,876.1 | 2,805.4 | 305.6 | 9.2x |
| MyBucks | XETR:MBC | 4.8 | 171.7 | 22.6 | 7.6x |
| **Mean** | | | | | 7.2x |
| **Median** | | | | | 7.6x |

| Multiple Ratio | Average | EV |
|---|---|---|
| **EV/Revenue** | 7.2x | 253.6 |

| 2.2 VC Style Valuation | | | |
|---|---|---|---|
| **Company Name** | **No. Funding Rounds** | **Total Funding** | **Approx. Valuation** |
| Yoco | 6 | 106 | 341.3 |
| Opay | 3 | 570 | 2,034 |
| Flutterwave | 13 | 234.7 | 1,027.2 |
| Tyme Bank | 4 | 169 | 265 |
| Kuda | 5 | 91.5 | 514.2 |
| MFS Africa | 4 | 117.2 | 359.9 |
| **Average valuation of private African FinTechs** | | | 756.9 |

| Mean Valuation for JUMO |
|---|
| 505.2 |

## Case References

[i] Jumo World. 2015. "Jumo Press Release 2015." Company Report, November 2015. https://pt.slideshare.net/LillyVanDerMerwe/jumo-press-release-nov-2015

[ii] Africa Payments Club. 2021. "The Influencer Podcast: Andrew Watkins-Ball (Part 1: The Business)." Accessed December 03, 2021, https://africapaymentsclub.com/f/andrew-watkins-ball-founder-ceo-of-jumo---podcast

[iii] Heavy Chef. 2017. "Heavy Chef Talks: Andrew Watkins-Ball On How Data Is Impacting FinTech In Africa." Accessed December 03, 2021, https://www.youtube.com/watch?v=6qMliImT_DQ

[iv] Jackson, T.. 2015. "Helping Africans improve their lives by tracking their phone usage". Accessed December 09, 2021, https://thenextweb.com/news/helping-africans-improve-their-lives-by-tracking-their-smartphone-usage

[v] This section was written using the same reference as in iii.

[vi] This section was written using the same reference as in iii.

[vii] Absa, "First-ever Africa Barclays Accelerator programme concludes." Accessed December 03, 2021, https://www.absa.africa/media-centre/media-statements/2016/first-ever-africa-barclays-accelerator-programme-concludes/

[viii] EIB. 2016. "First-ever Africa Barclays Accelerator programme concludes." Accessed December 03, 2021, https://www.eib.org/attachments/efs/economic_report_banking_africa_digital_financial_inclusion_en.pdf

[ix] UNCTAD. 2021. "Economic Development in Africa Report 2021". Accessed December 14, 2021, https://unctad.org/system/files/official-document/aldcafrica2021_en.pdf

[x] International Finance Corporation, "The Partnership for Financial Inclusion." Accessed December 03, 2021, https://www.ifc.org/wps/wcm/connect/region__ext_content/ifc_external_corporate_site/sub-saharan+africa/priorities/financial+inclusion/za_ifc_partnership_financial_inclusion

[xi] PwC. 2016. "Disrupting Africa: Riding the wave of the digital revolution." Industry Report, 2016. https://www.pwc.com/gx/en/issues/high-growth-markets/assets/disrupting-africa-riding-the-wave-of-the-digital-revolution.pdf

[xii] This section was written using the same reference as in xi.

[xiii] This section was written using the same reference as in iii.

[xiv] BCG. 2015. "Africa Blazes a Trail in Mobile Money." Accessed December 03, 2021, https://www.bcg.com/publications/2015/financial-institutions-telecommunications-africa-blazes-trail-mobile-money

[xv] TechCrunch. 2018. "Africa's Jumo raises $52M led by Goldman to bring its fintech services to Asia." Accessed December 03, 2021, https://techcrunch.com/2018/09/17/jumo-raises-52m-led-by-goldman/

[xvi] CGAP. 2015. “What is USSD & Why Does it Matter for Mobile Financial Services?” Accessed December 03, 2021, https://www.cgap.org/blog/what-ussd-why-does-it-matter-mobile-financial-services

[xvii] Independent. 2015. “In Africa, to secure a loan you now hand over your phone for a high tech financial health check.” Accessed December 03, 2021, https://www.independent.ie/business/world/in-africa-to-secure-a-loan-you-now-hand-over-your-phone-for-a-high-tech-financial-health-check-31552512.html

[xviii] Institutional Asset Manager. 2020. “JUMO breaks the USD2.5bn disbursement mark in Africa and Asia.” Accessed December 04, 2021, https://www.institutionalassetmanager.co.uk/2020/11/23/292564/jumo-breaks-usd25bn-disbursement-mark-africa-and-asia

[xix] Centre for Financial Inclusion. 2016. “Building Trust and Growing Digital Financial Services: A Look at JUMO.” Accessed December 04, 2021, https://www.centerforfinancialinclusion.org/building-trust-and-growing-digital-financial-services-a-look-at-jumo

[xx] This section was written using the same reference as in xix.

[xxi] Blechman, Jason, G. 2017. “Mobile Credit in Kenya and Tanzania: Emerging Regulatory Challenges in Consumer Protection, Credit Reporting and Use of Customer Transactional Data.” *The African Journal of Information and Communication (17)*: 61-88. https://journals.co.za/doi/pdf/10.10520/EJC-7cb9edfe9

[xxii] This section was written using the same reference as in xxi.

[xxiii] Jumo World. 2018. “Letshego, MTN Ghana and JUMO celebrate 1M Qwikloan customers.” Accessed December 04, 2021, https://www.jumo.world/press-release/letshego-mtn-ghana-and-jumo-celebrate-1m-qwikloan-customers/

[xxiv]VEF Press Release. 2021. “VEF Portfolio company Jumo announces USD 120 mln financing round led by Fidelity, Visa and Kingsway”. Accessed December 04, 2021, https://storage.mfn.se/797f677a-649a-40f2-b2da-3be0e0428ccd/vef-portfolio-company-jumo-announces-usd-120-mln-financing-round-led-by-fidelity-visa-and-kingsway.pdf

[xxv] Staff, V.. 2018. “South African fintech Jumo raises $52m in new funding round”. Accessed December 09, 2021, https://www.retailbankerinternational.com/news/south-african-fintech-jumo-raises-52m-new-funding-round/

[xxvi] JUMO World. “Our People”. Date Accessed December 14, 2021, https://jumo.world/our-people/

[xxvii] This section was written using the same reference as in ii.

[xxviii] Venture Burn. 2016. “Former Magento heavyweight boards booming SA fintech startup.” Accessed December 04, 2021, https://ventureburn.com/2016/01/former-magento-heavyweight-boards-booming-sa-fintech-startup/

[xxix] Disrupt Africa. 2021. “Finnovating for Africa 2021.” Accessed December 04, 2021, https://disrupt-africa.com/finnovating-for-africa/

[xxx] GSMA. 2021. “State of the Industry Report on Mobile Money 2021”. Accessed December 14, 2021, https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2021/03/GSMA_State-of-the-Industry-Report-on-Mobile-Money-2021_Full-report.pdf

[xxxi] This section was written using the same reference as in xxix.

## Teaching Note References

[xxxii] Statista, "Key Market Indicators", FinTech Worldwide Digital Markets, Accessed December 09, 2021, https://www.statista.com/outlook/dmo/fintech/worldwide#key-market-indicators

[xxxiii] Disrupt Africa. 2021. "Finnovating for Africa 2021." Accessed December 04, 2021, https://disrupt-africa.com/finnovating-for-africa/

[xxxiv] Jackson, T.. 2015. "Helping Africans improve their lives by tracking their phone usage". Accessed December 09, 2021, https://thenextweb.com/news/helping-africans-improve-their-lives-by-tracking-their-smartphone-usage

[xxxv] Harvard Business Review. 2016. "What Startup Accelerators Really Do." Accessed December 04, 2021, https://hbr.org/2016/03/what-startup-accelerators-really-do

[xxxvi] McKinsey & Company. 2020. "Harnessing Nigeria's fintech potential." Accessed December 04, 2021, https://www.mckinsey.com/featured-insights/middle-east-and-africa/harnessing-nigerias-fintech-potential

[xxxvii] This section was written using the same reference as in xxxvi.

[xxxviii] This section was written using the same reference as in xxxvi.

[xxxix] This section was written using the same reference as in xxxvi.

[xl] The Economist. 2021. "Africa's fintech firms vie for domination." Accessed December 09, 2021, https://www.economist.com/finance-and-economics/2021/11/06/africas-fintech-firms-vie-for-domination

[xli] Statista, "Share of the population without access to the services of banks or similar organizations worldwide in 2021, by country." Accessed December 04, 2021, https://www.statista.com/statistics/1246963/unbanked-population-in-selected-countries/

[xlii] World Economic Forum, 2021. "This new approach to credit scoring is accelerating financial inclusion in emerging economies." Accessed December 04, 2021, https://www.weforum.org/agenda/2021/01/this-new-approach-to-credit-scoring-is-accelerating-financial-inclusion/

[xliii] World Bank Group. 2019. "Credit Scoring Approaches Guidelines." Industry Report, 2019. https://pubdocs.worldbank.org/en/935891585869698451/CREDIT-SCORING-APPROACHES-GUIDELINES-FINAL-WEB.pdf

[xliv] BBVA. 2019. "Everything you need to know about PSD2." Accessed December 04, 2021, https://www.bbva.com/en/everything-need-know-psd2/

[xlv] Africa CEO Forum. 2021. "Will AI risk analysis really expand credit in Africa?" Accessed December 04, 2021, https://www.theafricaceoforum.com/en/ressources/will-ai-risk-analysis-really-expand-credit-in-africa/