# The Game of Phones

A discussion paper on the factors affecting mobile device finance

Mobilise

There is ample opportunity for the mobile industry and ecosystem players to improve smartphone affordability and to provide a range of finance products to suit a wide range of consumers.

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# Introduction

Mobile Network Operator profitability in the mobile segment in Europe is under pressure, particularly in more mature markets where expensive handsets are often subsidised to drive growth in high ARPU post-paid segments. Handset subsidy was, until recently, considered as a good marketing and retention model for high value clients, despite its significant costs, these handset subsidies however weigh heavily on the MNOs' balance sheet and are increasing in time, due to the high cost of smartphones.

In retracting device subsidy offers, operators have the potential to ease this financial pressure and lower the cost per customer acquisition. However, such strategic shifts can offer rewards but are never risk-free. Along with awareness of the demand for high quality refurbished devices, there has been a fast-growing demand for innovative finance solutions to enable a wider audience to purchase smartphones. Whilst the refurbished market does provide a lower price point for purchase, there remains a large consumer market that would wish to purchase a new smartphone, particularly the aspirational iPhone, if there were suitable finance options available to spread the cost of purchase.

Piran Partners estimate over a million customers in the UK are rejected every year having failed mobile operators' credit checks. Though many will never pass any form of check, they have forecast that any provider who can 'crack' this challenge will be able to tap into new revenue streams.

There are a large variety of demand side factors influencing smartphone affordability and people's willingness to pay. Consumers' disposable income combined with their value perception of the device and the internet are particularly influential. These elements, coupled with levels of awareness of what smartphone and internet usage entails and can deliver, and whether use cases are convincing enough to justify the expenditure hugely impact upon demand. Limited knowledge about smartphones further manifests in gaps between perception and reality around device prices. Consumers commonly have an exaggerated view of smartphone costs, which leads to the belief that such handsets are unobtainable, even in cases where the consumer would in fact be able to afford the device.

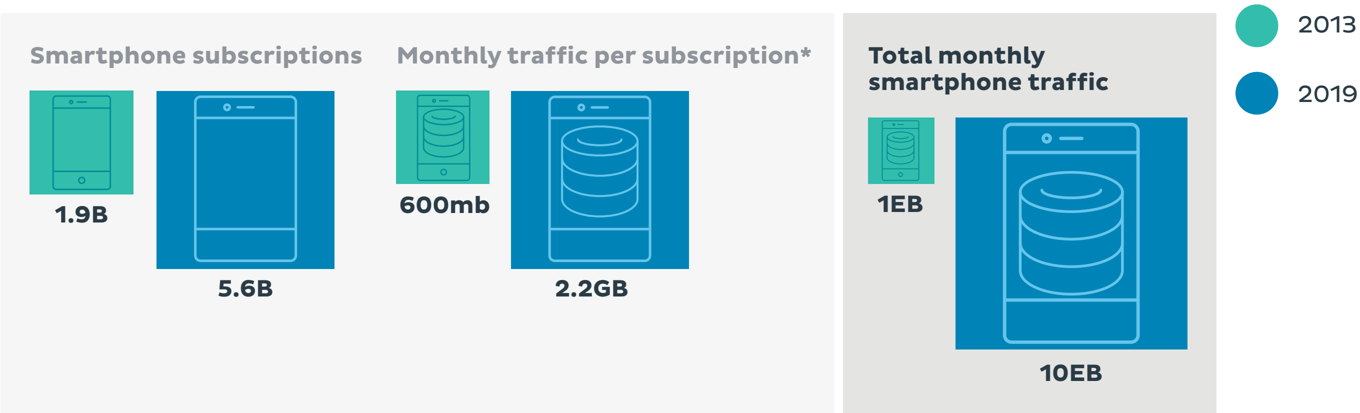
There is ample opportunity for the mobile industry and ecosystem players to improve smartphone affordability among these consumer segments and to provide a range of finance products to suit a wide range of consumers with an appropriate and aligned set of credit checks and with a number of innovative and consumer friendly features which can be made available at a low monthly payment to those consumers who would normally be excluded from such a purchase by way of price point or inability to obtain credit.

In the following paper we set out some of the key factors that we feel need to be considered by Mobile Operators, MVNOs and other players entering the device marketplace.

# The market place

## First and foremost, in today's Data Centric world, it is all about Smartphones!

**Global smartphone traffic to increase 10x by 2019**
Forecast of global smartphone subscriptions and monthly smartphone data traffic




*Active subscriptions do not include multiple sims or inactive devices

Source: Ericsson

With major changes and shifts in who "controls" the Mobile "ecosystem" with major players including the "TechGiants" such as Apple, Amazon and Google already looking at becoming network providers and providing handset finance programs.

This continuing rise in the price of new smartphones is causing Consumers to buy their smartphones in different ways, which allied with the MNOs' shift from subsidy plans towards Equipment Instalment Plans (EIPs) could cause a "push out" of the replacement cycle as customers are being increasingly offered plans that give a discount on their monthly bills when the initial plans lapse.

Also, there is evidence that the used smartphone market is becoming larger, which will reduce demand for new mid/low-end handsets, in favour of pre-owned high-end models as the price differentials erode and the choice becomes between a new mid-range phone and a refurbished high-end phone.

### In summary we see three key drivers evolving:

1. MNOs are less aggressive in pushing new smartphones as incremental churn and ARPU benefits dissipate. As smartphones approach full penetration in developed markets, and wireless carrier economics become more challenging, carriers are less focused on pushing new smartphones and more focused on cash flow this will impact upon smartphone growth.
2. The "pre-owned" smartphone market is still underappreciated despite mounting evidence that the used smartphone market is growing, as prices from third party marketplaces are as much as 10-30% lower than the new retail price for comparable handsets. It was estimated the global used smartphone market was roughly ~83 million units in CY15E and will grow at a 24%+ CAGR through CY18E to ~158 million units. Some reports estimate for every 100-basis point increase in the CY14 recycle rate it results in a 72-basis point decrease in CY16E smartphone shipment growth.
3. Smartphone growth could slow meaningfully as the impact of replacement rates being pushed out and the growth in the "pre-owned" market impacts overall growth as the shift from subsidy models to EIP/leasing/used smartphone sales models become more prevalent with MNOs competing primarily on Airtime price.

# Secondary market ("Pre-Owned") market considerations

It is this increase in price of new products that provides the mounting evidence that the "Pre-owned" smartphone market is growing and is having the effect of making consumers feel more comfortable buying used smartphones, and this is supported by Apple's own iPhone Upgrade Program (and likely increase in its used smartphone sales to third-party distributors).

It is estimated the pre-owned smartphone market will grow at a 24%+ CAGR through CY18E.

It is also interesting to note that the main smartphones traded in are typically high-end models; however, their specs and prices when traded in (normally after two years) are more competitive with new mid-range/low-end offerings. As a result, it is expected the non-high-end of the smartphone market to face increased competition as the specs and price points for 2-year-old, formerly high-end phones are very competitive and we see more consumers buying pre-owned smartphones which we believe will incentivize MNOs and other companies to push forward the used smartphone market.

Interestingly, the Apple ecosystem could benefit from the above changes. Pushing 1-year upgrades will benefit the high end of the smartphone market (the demographic buying new iPhones want the latest model). While pushing more used iPhones into the market may cannibalize some older iPhone sales, it also has the potential to increase Apple's overall market share (consumers could choose 1-2-year old iPhones over a new, mid-range Android device) and thus support its high-margin app sales. However, this presupposes suitable finance plans can be provided to meet the cost of the increased Retail process of Apple products.

24%+

**estimated growth of the pre-owned smartphone market**

# Residual Value considerations

As all these models fall into different price segmentations, ranging from high-end to low-end, it is important to determine how long customers are willing to hold their devices before they are recycled and added into the secondary phone market. For subsidy plans it is estimated that customers normally hold their phones until they are eligible for an upgrade (~2 years) while some will hold phones longer due to the upfront cost of upgrading their device. As a result, it is estimated that 3% of customers part ways with their phones after 1 year, 80% after 2 years, 7% after 3 years, and 10% after 4 years. This results in an average replacement cycle of 2.2 years for customers using the subsidy model.

(source: Smartphone Finance)

For EIP we believe that customers are economically incentivized to hold their phones for a longer period as they are paying full price for their device and the economic benefit kicks in once the customer has completed their instalment payments and can enjoy the reduced service plan payments resulting from the EIP. As a result, we estimate that 25% of EIP customers will hold their phone for 2 years, 50% for 3 years, and 25% for 4 years. This results in an average replacement cycle of 3.0 years for customers using the EIP model.

There is a recognition of Residual Value with several programs appearing recently.

In summary, there are many traditional Loan and HP ‘ownership’ type solutions in the market with credit acceptance rates that vary between 25% & 75%.

However, whilst currently there is a lack of FCA (in the UK and many other countries, consumer finance is a regulated product) approved platforms incorporating RVs. (Thinksmart are the only UK provider offering B2C Leases with Dixon Carphone) the Market increasingly wants Residual Value based structures as a way of reducing monthly instalment costs to the end user and we expect to see increasing numbers of FCA RV based finance offerings, but these will take 12-18 months to come to market. Interestingly, there is no evidence that anyone is currently using Residual Values to support second user / pre-owned devices.

| | Consumer |
|---|---|
| Sky | **Sky Swap**<br>1 or 2 year refresh |
| Tesco mobile | **Anytime Upgrade Flex**<br>2 year refresh |
| O2 | **On Us**<br>1 year refresh |
| EE | **Annual Upgrade**<br>1 year refresh |

| | Business |
|---|---|
| TechData | **Business Lease**<br>2 year refresh |
| SAMSUNG | **Business Lease**<br>1, 2 or 3 year refresh |
| vodafone Global Enterprise | **Device Lifecycle Management**<br>1 year refresh |
| Microsoft Surface | **Surface as a Service**<br>2 year refresh |

# Changing market conditions for MNOs

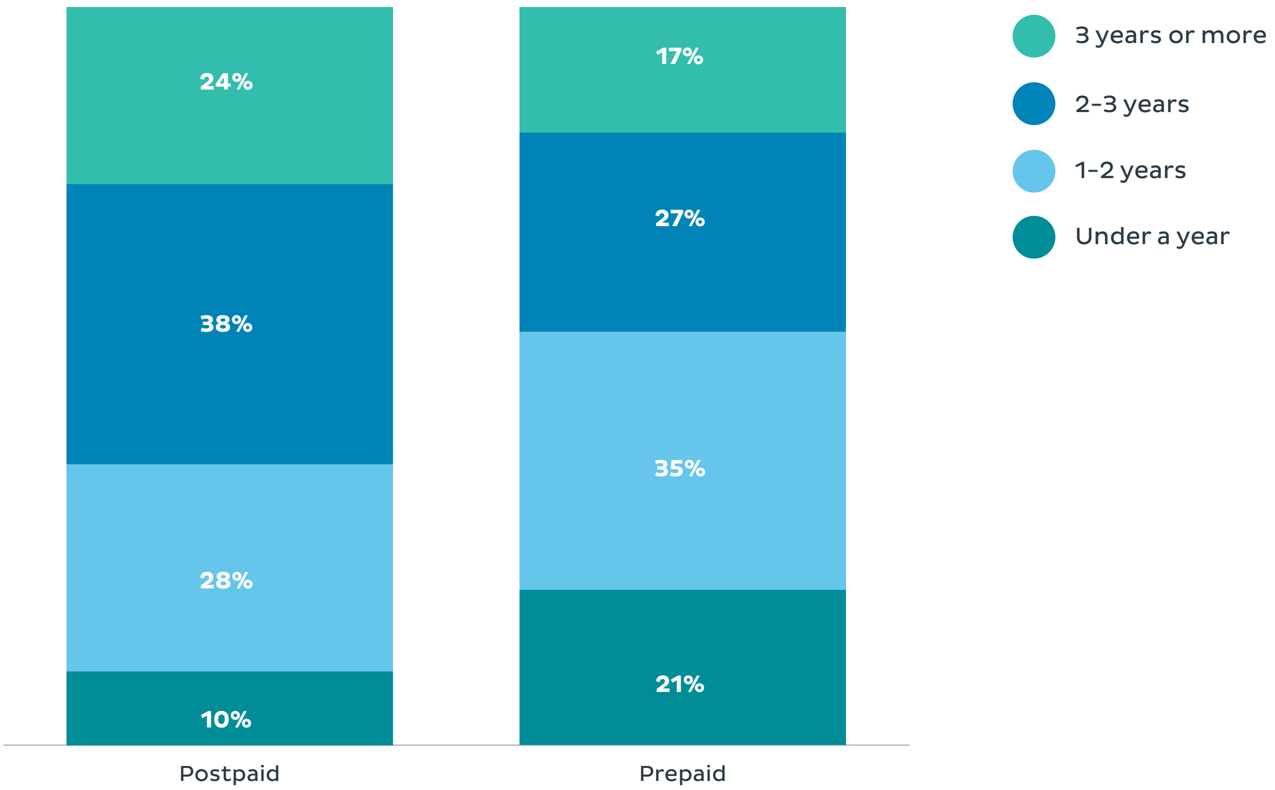
There is already clear evidence of a trend towards the removal of handset subsidies and the offering of separate finance or lease plans for handsets. MNOs have traditionally been concerned that, without contracts and SIM-locked phones, they will become “connectivity” providers (the so call “dumb pipe” scenario) only and will need to increasingly stress network quality and Value Added Services (VAS) to differentiate themselves from one another.

As discussed above, there are several factors that have affected device purchase and not only the costs, functionally and desirability (Fashion?) of the devices themselves but also the underlying behaviour of the mobile market itself with its split between prepaid and contract users that adds another dimension to the problem. For instance, the prepaid (PAYG) segment has historically recorded the shortest upgrade cycle, due in part to affordable pricing and high churn. In the second half of 2017, 21 percent of prepaid smartphone users reported upgrading their devices within a year of purchasing their phone, this compares to only 10 percent of post-paid (Contract) consumers.

21%

**prepaid smartphone users reported upgrading their devices within a year of purchasing their phone**

**Prepaid smartphones get faster upgrades**
Age of previous smartphones owned



According to IHS Markit's Technology, Media, and Telecom group, reducing financing costs to liberate cashflow has become critical for telecom providers as wireless networks continue to grow in scope and complexity. Whereas 2G and 3G networks ran on a fixed allotment of licensed spectrum, 4G networks require additional spectrum to scale capacity and data throughput and it is forecast the advent of 5G with its need for even higher cell site density will only increase these pressures. Consequently, to remain competitive, carriers are forced to invest constantly in network infrastructure.

> There are several factors affecting the time between upgrades. Flagship devices are getting more and more expensive whilst at same time there is increasing evidence that consumers may view new models as only incrementally better than the previous, and not worth the substantial upgrade costs.

The downside of this strategy for MNOs is that by selling unlocked phones in a subscriber environment devoid of fixed-term contracts, it makes it easier for users to change carriers. It is expected this dilution of the subscriber relationship, lack of new innovation and differentiation for physical features on handsets has reduced the consumer desire to replace devices on such a frequent basis and will result in a higher level of subscriber churn in the market based on airtime costs and could work to the advantage of disruptors such as MVNOs, OEMs, Content Providers and other new entrants controlling large customer base such as banks, retailers etc. and, of course, the "TechGiants" themselves.

It also demonstrates how fickle (aware?) the cash-conscious consumer now is, though the woeful customer service records of the UK operators have failed to encourage brand loyalty. The experience of other utilities (which Mobile is now considered) has shown that the game now for MNOs is to offer as much as possible, and bank on the economics of scale and cross-selling to bring in the revenues. If data will define the attractiveness of a contract in the connected era, savings will have to be made elsewhere.

In looking at the wider global trends, it is interesting to note that according to one study (source: NPD Connected Intelligence 2018), the average U.S. smartphone upgrade cycle is 32 months, up from 25 months one year prior (2H 2017 vs. 2H 2016). Over the same period, the percentage of smartphone users holding on to their smartphones for over three years has increased from 18 percent in the second half of 2016 to 22 percent in the second half of 2017.

As referred to above, there are several factors affecting the time between upgrades. Clearly one is that flagship devices are getting more and more expensive whilst at same time there is increasing evidence that consumers may view new models as only incrementally better than the previous, and not worth the substantial upgrade costs. Of course, the upgrade cycle may soon shorten again with the launch of 5G wireless networks and phones.

It can be speculated that the current costs of flagship devices and the amount of time consumers now take to upgrade their phones, may be a reason why T-Mobile in the USA is currently testing out 36-month phone payment plans, in essence what are equipment instalment plans (EIP). T-Mobile's EIPs are normally for 24 months. With 36-month payment plans possibly in play, those flagship devices will become more affordable for some. Oddly enough, T-Mobile isn't testing out the payment plan option with the most expensive phone it sells but is doing it with the Samsung Galaxy Note 9 which suggest this is a test program to evaluate consumer reaction but does highlight the fact the MNOs themselves have recognised the need to address the issue of high device costs.

Whether or not the new policy has an impact on phone sales and T-Mobile's customer churn rate remains to be seen. However, if more phones are offered on a 36-month EIP in the coming months it will likely be viewed as a successful policy change and something other MNOs will be watching closely.

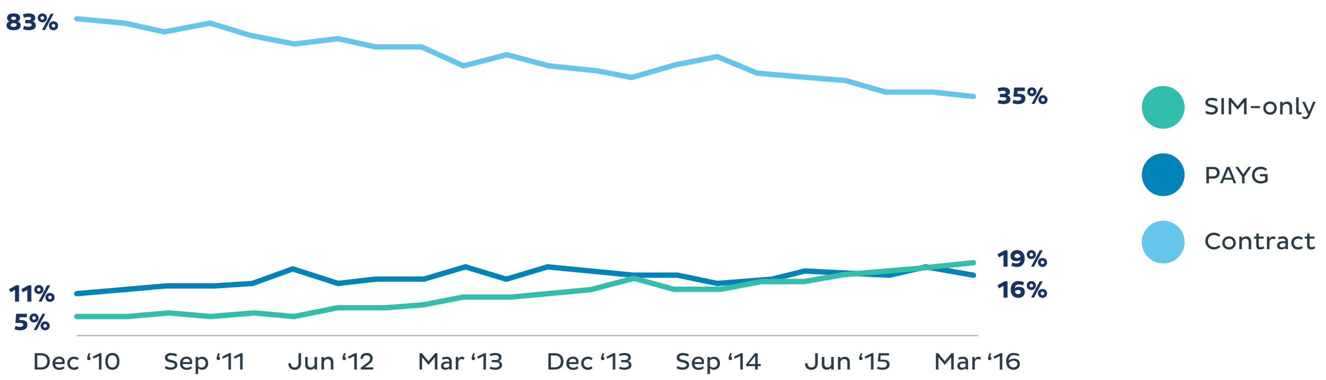
# Traditional mobile device financing

Historically, consumers would purchase mobile phones at deep discounts in exchange for signatures on multi-year contracts – ultimately binding individuals to telecom providers. This arrangement worked well during the age of flip phones on slower (2G) wireless networks, as inevitable price deterioration made device subsidisation sustainable.

However, as mentioned above, the proliferation of smartphones has driven the average sale price of mobile devices to prohibitively expensive levels thereby reducing the addressable market to higher income earners or businesses – consequently forcing MNOs to shift full market prices onto consumers at the same time as they look to leverage receivables from mobile phone instalment (Contract) plans to tap a cheaper source of debt financing.

**Five-year snapshot: SIM-only increases as contracts decline**

All smartphone owners




Whilst subsidised-handset deals may have been a good way to attract the consumer to the smart phone market during the early days of the technology, the wave of OTT services now available to the consumer has impacted the profitability of the operators in recent years. A lower reliance on SMS and call allowances on contracts has resulted in a desire for new business models at the MNOs, with many moving towards the multi-play market.

SIM-only (SIMO) is now the largest category in the mobile phone market in terms of sales,

Contract SIMO accounted for 29% of the mobile phone market in Q4 2017 (source: CCS Insight) making it the largest category. Key to its success has been its ability to attract customers from both PAYG and Contract handset tariffs, while maintaining appeal with those already on Contract SIMO tariffs. Once customers move to Contract SIMO, many tend to stay, further proof of changing consumer behaviours.

This transition has also been coupled with the growth of the MVNO market, with new entrants such as TalkTalk and Sky, creating a race to the bottom as data tariffs become more prominent in contracts.

With the total subscriptions in the UK growing towards 87 million by 2021 we see greater penetration by the MVNOs, but it is not just the shift away from contracts that has affected the cost of running a smartphone and consequently operator revenues. In the past six years the average monthly amount paid by people with contracts has fallen from almost £32 to around £27 as the proportion of smartphone owners tied to a monthly bill fell. It is a similar story among those on pay as you go where our research has indicated that spend has decreased from £12 to £10 while the proportion of smartphone owners on PAYG has increased from 10% to 16%.

Combining these two different competitive threats creates not only the desire, but a necessity to create new business models to recoup eroded profits.

# The change in mobile device financing

The UK's payment markets tend to evolve slowly over time. We are creatures of habit when it comes to the methods we use to make and receive payments. However, changing consumer preferences, innovation in payment methods, technological development and other drivers have seen considerable changes in the UK's payment markets over the past decade.

There are a wide variety of payment methods available in the UK. Each payment method provides specific benefits to the participants in the transaction. Payers generally choose the method that best meets their needs in any given situation, albeit sometimes influenced by the preferences of the payee.

Other payment methods include (but are not limited to) online and mobile payment methods such as PayPal, Apple Pay, Google Pay and Samsung Pay. This is a growing part of the payment market, with these methods collectively accounting for a greater volume of payments than either standing orders or cheques.

However, when it comes to Mobile Phone contracts traditionally, lots of UK consumers have bought their smartphones on a 24-month contract.

On a 24-month contract, customers normally get a brand-new smartphone for a reduced upfront price (or even no upfront payment for the handset). In exchange, the customer pays higher monthly line rental, every month for the next 24 months.

In effect, a 24-month contract is like borrowing from your mobile network the upfront amount to buy a new handset. Then they will pay back the cost of the handset in monthly instalments over 24 months. Although 24-month contracts are not explicitly advertised as a loan, customers still need to undergo a credit check and will often pay hidden APRs of around 30%.

Not only that, the customer will typically be locked in to one mobile network and one handset for a period of 2 years with punitive exit fees for changing either one too early. There's also very little transparency about how much the customer is paying for the handset and for the airtime (the two things are bundled together into a single monthly price).

When it comes to mobile phone contracts, traditionally lots of UK consumers have bought their smartphones on a 24-month contract.

In effect it is like borrowing from your mobile network the upfront amount to buy a new handset.

# Benefits of unbundled

## However, by buying the mobile phone separately from the airtime tariff, the customer will be taking an "unbundled" deal. There are three key benefits to doing this:

1. The customer can save money compared to a 24-month contract. With a 24-month contract, the user often needs to pay hidden APRs of about 30%. By buying separately, the customer will be able to avoid this, often saving hundreds of pounds in the process.
2. The customer will have more flexibility to change their handset or tariff. They will be able to change their handset or mobile network separately and independently from each other. This can be useful, for instance, if the old phone gets lost or stolen. Alternatively, if the old smartphone stops working or they want to upgrade to a newer model or change mobile networks to benefit from better coverage or lower prices. With a 24-month contract, they will need to change both at the same time (meaning a larger early termination fee if they change during the minimum term).
3. The customers have greater transparency about how much the handset & tariff are really costing. They will know exactly how much they are paying for the handset, and how much they are paying for their airtime. This makes it easier to compare against other handsets and mobile networks.

With these unbundled deals, the customer has a separate payment plan for the handset and tariff.

The three key benefits:

The customer can save money

The customer has more flexibility

The customer has greater transparency.

# Unbundled phone providers

There are three main ways of buying a mobile phone on an unbundled basis. The customer can either go to a retailer like Unshackled that specialises in unbundled phone deals or go to a mobile network that offers unbundled deals directly, or "do-it-yourself" by buying a handset and SIM card from two different retailers.

There are several mobile networks who currently offer an unbundled deal directly to the consumer. These are the GiffGaff phone store, O2 Refresh, Tesco Mobile Anytime Upgrade and Virgin Mobile Freestyle.

The following table shows a side-by-side comparison of how much it would cost to buy the 32GB iPhone 7 from Unshackled and directly from each mobile network:

| | UNSHACKLED.com NO STRINGS MOBILE | giffgaff | O2 | TESCO mobile | Virgin media |
|---|---|---|---|---|---|
| **Features** | | | | | |
| Unlocked Handset | ✓ | ✓ | ✗ | ✗ | ✗ |
| Airtime Provider | Choose from 14 networks | giffgaff | O2 | Tesco Mobile | Virgin Mobile |
| Finance Provider | Zopa | RateSetter | O2 | Tesco Mobile | Virgin Media Mobile Finance |
| **Handset Financing** | | | | | |
| Tariff Name | Unshackled | Goodybags | Refresh | Anytime Upgrade | Freestyle |
| One-Off Price | £599 | £579 | £657.99 | £666 | £720 |
| Interest Rate | 9.7% APR | 18.9% APR | 0.0% APR | 0.0% APR | 0.0% APR |
| Upfront Payment | £19 | £25 | £9.99 | £0 | £0 |
| Monthly Payment | £26.57/ month* | £28.49/ month* | £27/month | £27.75/month | £30/month |
| **Total Amount Payable** | **£637.68*** | **£684.76*** | **£657.99** | **£666** | **£720** |

Illustrative comparison in 2017 of handset financing options for the 32GB Apple iPhone 7.

* With Unshackled.com and giffgaff, you can reduce the total amount payable either by increasing your upfront payment or by paying off your loan early.

# Do it yourself

Finally, as an alternative to the previous, the customer can always do-it-yourself by buying an unlocked handset and then getting the best value SIM-only deal.

Good retailers for buying an unlocked handset off-contract include John Lewis, Unshackled, Amazon and Argos. Sometimes, customers can also buy directly from the manufacturer (e.g. from the Apple, HTC, Motorola, Samsung or Sony websites).

Once the customer has bought an unlocked handset, they can then choose from one of the best value SIM-only deals available on the market. With an unlocked handset, the customer be able to use any UK mobile network and be able to change mobile networks whenever they like.

The key player in this market is proving to be PayPal who are making an aggressive move into this space with several OEMs.

The key player in this market is proving to be PayPal who are making an aggressive move into this space.

# Market opportunity

## The current size of the UK Mobile market is circa 84 million and even allowing for a (small) amount of Dual SIM devices that means there is a demand for 84 million handsets.

At the same time the MNOs have been vying to move out of the subsidised-handset model for some time, primarily due to the cost. They are facing the fact that the proportion of SIM-only contracts could account for as much as 34% by the end of 2018, compared to 27% at the beginning (source: GfK Tech Consumer 360 Q3 2017). That means that over 18 million users have "de-coupled" their handsets from their airtime contracts. These are handsets that will need replacing at some point in time and in turn the clear majority will require finance of some kind.

As previously mentioned, new device launches see incremental improvements meaning people are holding on to their phones for longer and running down their contracts.

However, if we assume that refreshment rates of new sales have be calculated at 3% in Year 1 followed by 80% in Year 2, 7% in year 3 and 10% in year 4, this means that the market for finance is greatest at the end of year 2 and given there were circa 19 million new smartphone sales in 2017 then by the end of 2019 there will be a market for "de-coupled" finance of 4.5 million users plus the growth in high "pre-owned" sales.

While this is a new trend for UK customers who have become used to the two-year refreshment cycle, it is a position which is becoming more the exception than the rule. France and Spain, for instance, have been offering more attractive SIM-only deals for some time, with the latter proving to be quite successful. Orange's Spanish business reported 99% of consumer voice contracts were on such a deal as long ago as the last quarter of 2016.

So, the major difference in Europe is that phones aren't subsidised by an operator contract. People are used to paying the true cost of the handset. It's more popular for people to select & pay for their own phone via the open market, then choosing a SIM only package. Ultimately, in Europe, people are choosing the flexibility of the open market, which promotes choice.

34%

**The proportion of SIM-only contracts could account for as much as 34% by the end of 2018**

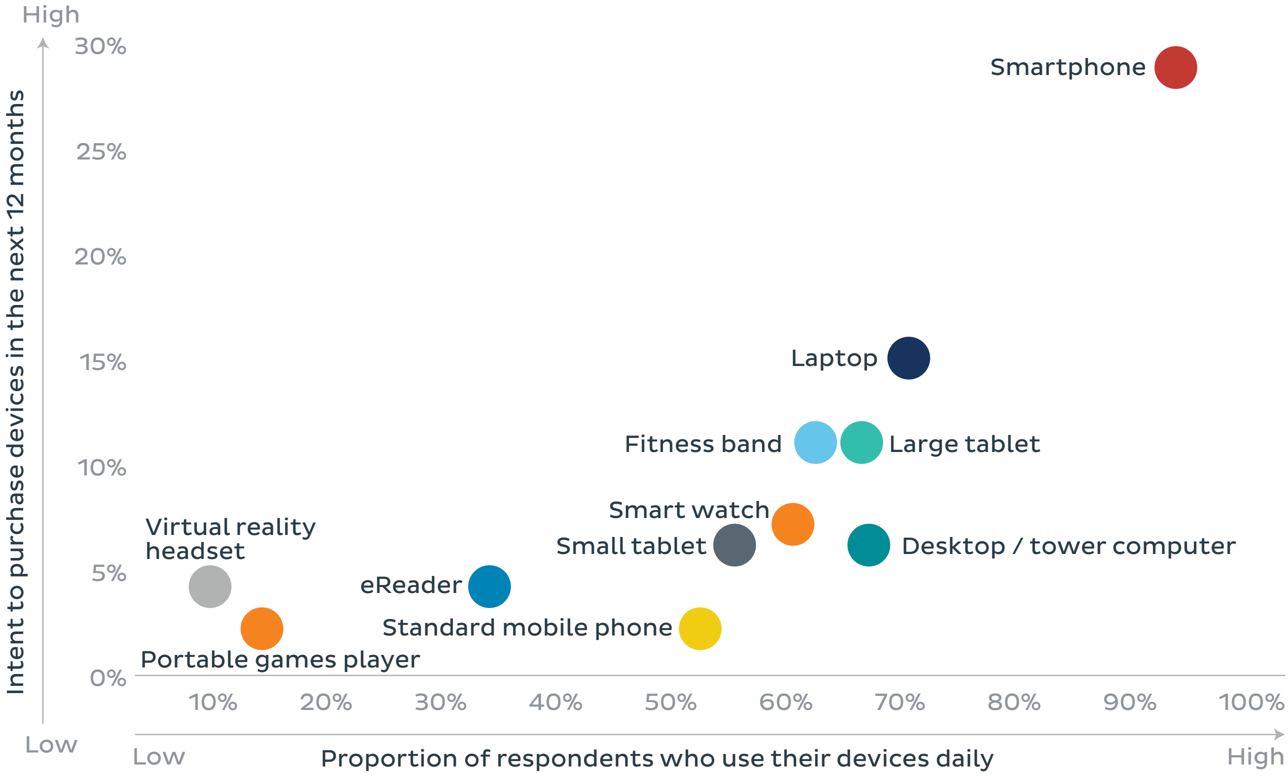
In Europe, phones aren't subsidised by an operator contract. It's more popular for people to select and pay for their own phone via the open market.

# Plan to acquire

Research (source: Consultancy UK) also notes that higher use frequencies among consumers also tended to correlate with higher intent to buy a new device in the next 12 months. For smartphones, the intent to buy a new or pre-used device in the next 12 months for the proportion that used such a device daily stood at almost 30%, compared to 15% of high-use laptop owners said that they would buy a new one in the coming 12 months.

**Intent to purchase devices in the next 12 months, by those who use devices daily**

Questions: Which of the following devices (new or pre-owned), if any, are you likely to buy or get in the next 12 months? Thinking of when you last used each device. Was it within the...?




Not many consumers polled were intending to buy a new standard phone, with few also planning to upgrade their eReader, portable game player (although new generations of portable game players such as Sony's PSP and Nintendo's DS ranges are notably less common than the annually evolving phone market) or virtual reality headset.

Almost half of UK millennials want to do their financial planning on a smartphone, a trend that poses significant challenges to financial vendors have traditionally delivered their services face-to-face. With 'Generation App' millennials, aged between 18 and 35, nearly twice as likely to use mobile phones than older generations, according to a survey by Legg Mason, a global asset management firm, demonstrates the rising popularity of smartphones among younger generations means ways of engaging with financial services. A total of 46 per cent of UK millennials are keen to use their smartphones to do all their financial planning – which is the highest in Europe, according to Legg Mason.

This desire corelates with shift in mobile device buying patterns and indicates the need for new and innovative approaches to providing finance for these devices.

# The user experience

Key to the success of any new finance offering is the provision of a satisfactory "User Experience". This has clearly been a challenge for financial institutions in meeting the potentially contradictory demands of customers for increased choice and increased simplicity.

Joakim Wallin, Head of Cards, Resurs Bank, sums up the tension well when talking about the requirements of a digital wallet. "It's all about giving the customer choice," he says. "Where do they want to purchase? In store, in app, online? We don't want to make choices for the customer: we want to allow the customer to choose." However, he also says: "If you build something that is too complex for a customer to use, they will never adopt it. You have to take away as many clicks as you can and make it as simple to use as possible for the customer."

As the Finance products will be competing not only against the MNOs offerings but also the traditional lenders if is worth looking at the experience of the Banking industry in their attempts to go "online".

The results revealed some startling trends. Bank processes are clearly out of alignment with consumer expectations:

> If you build something that is too complex for a customer to use, they will never adopt it.

40%

**40% of consumers have abandoned bank applications**

39%

**More than 1 in 3 (39%) abandonments were due to the length of time taken**

34%

**A third (34%) were due to needing too much personal information**

**And the abandonment rate is increasing.**

Those who have applied for a product in the last 12 months have abandoned more than those who last applied more than 12 months ago (45% vs 26%).

**The solution is relatively clear-cut. Consumers want applications to be processed entirely online, including identity verification for KYC.**

55%

**55% of respondents would be more likely to apply for a financial product if the process was 100% online**

52%

**Over half (52%) would buy additional services if paper-based identity paper was not needed**

97%

**97% of consumers have verified physical identity papers but cannot use them to accelerate on-boarding**

Consumer dissatisfaction with current on-boarding processes is clear, and this dissatisfaction manifests itself in abandoned sign-ups. We suggest that given the experience of MNOs this issue is relatively simple to rectify and in doing so increase the number of customers who sign up substantially. New customers would not be the only benefit; existing customers will be far more likely to purchase additional products.

Consumers want to move to digital and they want to be able to verify their identity online. The data shows that 97% of consumers have access to either a driving license, passport or utility bill that could form the basis of a digital identity, reducing the requirement to present personal information physically, accelerating the sign-up process online.

# New Routes to Market ("RTM")

Research has shown that the ability to purchase a smartphone varies widely within low-middle-income groups. The research suggests four primary customer segments related to people's level of affordability:

1. Beyond their means: primarily comprising of the extremely poor, often with no reliable income source, this group needs to make major trade-offs in household expenditure to afford even a basic internet-enabled handset. Smartphones are not affordable for this group.
2. Cannot afford to pay for a smartphone upfront but could afford to pay in instalments: comprising of the working poor, this group finds it difficult to adjust household expenditure to purchase smartphones through upfront payments.
3. Can save to pay for a smartphone: this group consists mainly of people at the higher end of the low-income segment. Individuals can save over time to purchase a smartphone.
4. Can afford lower priced smartphones through a lump sum payment: this group comprises of middle-income customers, typically with a reliable source of income. Members of this group are usually price conscious but have some flexibility to pick and choose among devices.

Four primary customer segments:

Beyond their means

Cannot afford payment upfront

Can save to pay

Can afford lower priced smartphones.

# The MVNO opportunity?

As the end user profile for Group 2 (i.e. cannot afford to pay for a smartphone upfront, but could afford to pay in instalments) is an end user profile that also closely matches that of the typical MVNO subscriber, using the MVNOs as a Sales Channel, offers a direct route to the end user via those companies and also has the added benefit of avoiding the need to create new separate marketing with all its associated high costs.

While the MNOs in the UK are yet to introduce similar device financing plans, MVNOs Virgin, Tesco and Giffgaff have all brought non-subsidised handset models to the market in recent years primarily using PayPal as the finance offering.

In conclusion we see the MVNO market as being a good opportunity for the provision of innovative and tailored finance products closely aligned with the subscriber profiles of each MNVO, not only for the reasons of consumer changes outlined above but also in that the MVNO market itself is growing rapidly offering growth as more and more MVNOs come to market.

This growth is matched also by the diversity of the types of MVNO (with diverse financing requirements) , but most forecasts indicate that in the future it will be normal for most mature markets to see over 10% of the domestic market being serviced by MVNOs, this will also future proof the investment as the technology is transferrable to new territories, thus providing a target market of over 1,000 MVNOs worldwide.

The MVNO market is a good opportunity for the provision of innovative and tailored finance products.

# In summary

The UK mobile phone market is both challenging and saturated, operating against a backdrop of stagnant device sales, rising prices and falling consumer confidence in the traditional MNOs, combined with increasing competition, not only from Sky and BT the triple and quad players who promote combined mobile, broadband and TV packages, but from new MVNOs and sub-brands aimed specifically at the SIMO market.

Out of the most important features when choosing a new phone, price comes second only to battery life.

For handset buyers in Q3 2017, the most important feature when buying a handset was "a good battery life". With 50% of Q3 handset purchasers citing this as the most important feature, poor battery life is clearly a real pain point. The second most important feature is price (42%). (Source: GfK Tech Consumer 360 Q3 2017)

The research from uSwitch suggests that SIM-only has effectively taken the place of prepaid in the market, but it has the potential to grow and become larger than the traditional 12- or 24-month contract market. This could threaten the future of the 2,500 or so mobile retail stores in the UK and offer new opportunities for niche handset manufacturers to chip away at the market share of the two dominant handset brands.

It also appears that the growth of MVNOs, which now account for around 15% of the market, combined with the growth of the SIM-only market could threaten the traditional network operators. According to the uSwitch research consumers struggle to differentiate the networks, which must concern the operators. UK service providers may look to networks like Elisa Telecom in Finland where tariffs are tiered by speed, enabling consumers to easily opt for superfast internet on their mobile.

On the face of it, the UK mobile market is a straight shoot-out between iOS and Android devices and Samsung and Apple brands. However, in fact consumer choice is widening, with more flexible operator tariffs available and a wider choice of handsets, Consumers are less inclined to commit to long term tariffs linked to the latest handset and instead pick the right choice for them, based primarily on price considerations and driven by an increasing demand for the right level of data all of which is driving the demand for more innovative methods of finance.

The growth of MVNOs combined with the growth of the SIM-only market could threaten traditional network operators.

# About Mobilise

Mobilise was founded in 2011 by Hamish White, who noticed a gap in the market for a consulting company specialising in MVNOs and mobile technology. In response, he set up Mobilise Consulting, building upon his decades of experience in consulting for MVNOs and MNOs.

Mobilise Consulting now provides innovative mobile solutions to companies across the globe, enabling the realisation of corporate goals and new initiatives at low overhead. It offers consultancy services to MVNOs and others looking to enter the telecoms industry, including strategy, business casing, feasibility study, project management, solution architecture and service operations.

In 2015, Mobilise set up a new business unit, Mobilise Technology, which specialises in software development and providing connectivity and hybrid solutions to the telecoms industry. Mobilise rebranded the group to Mobilise Global in 2018.

## About the Authors:

### Paul Wade

Paul Wade is an experienced C-level Commercial and Business Development professional, well known in the MVNO industry , although now semi-retired, he maintains a close connection with Mobile Telco industry and his background, originating from his time at Vodafone leading the commercial teams for licence Bids, through to the founding of Smarter Mobile, a specialist SME MVNO and wireless solution provider in the UK, has given him a deep insight to the MVNO scene.

A frequent speaker at MVNO conferences, he led the acquisition of Family Mobile MVNO (originally set up for IKEA in the UK) and managed other MVNO projects in Canada, USA, Oman, Palestine and most recently, he was Strategy consultant to the EcoRenew Group ( Hong Kong) where he managed the acquisition of 3 UK companies, Mazuma Mobile (the UK largest mobile recycling company) ICT Reverse asset management ( a leading UK data wiping and IT equipment disposal company) and iMend ( a leading mobile device repair company) and where he also established EcoRenew Finance Limited, a specialist Mobile device finance company and obtained full FCA UK lending license for the group giving him unique insight to the wider mobile phone "eco system".

### Hamish White

Hamish White is the founder and CEO of Mobilise and is a hands-on telecoms entrepreneur with 19 years' experience supporting Tier 1 & Tier 2 International Telecommunications Operators. Before founding Mobilise he worked as a consultant launching and growing start-up telecoms companies primarily in the MVNO domain. This included the launch of 8 MVNOs across 5 countries.

His background is in technology, however his management experience spans the end to end telecoms value chain including in depth knowledge of sales & marketing, commercial, finance, operations and technology functions.

Hamish specialises in helping companies with digital transformation and establishing mobile app strategies.

Mobilise

T +44 20 3910 0331
E info@mobilseglobal.com
W mobiliseglobal.com

63 St Mary Axe, London EC3A 8AA