Risks and impact of handset financing: lessons from the US

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Since the launch of handset financing plans in 2013, the US market has rapidly embraced the schemes over the traditional subsidy model of mobile contracts. In addition to equipment instalment plans, handset financing in the US has evolved to include leasing models, adding a further layer of complexity for operators in terms of implementation and accounting impact. Handset financing fundamentally changes the way operators book their revenue and costs, and as a result has heavily affected operators' top-line financials.

Although the US market is unique in many respects, operators in other markets should be aware of the factors that drove the adoption of handset financing in the US, and the implications if it is used as a competitive lever in their domestic markets.

Types of handset financing

Under the traditional subsidy model, customers typically sign a two-year contract, often paying an upfront fee (depending on the device) and make recurring monthly payments over the course of the contract. The onus is then on the customer to either renew their contract with the operator or churn to a rival; if not, they continue to pay the same monthly fee.

Handset financing unbundles the cost of the phone from the cost of the service into two billing instalments, whereas the traditional subsidy model includes both costs in a single payment. Handset financing comes in two variants:

- **Equipment instalment plans** (EIPs) allow customers to receive a new handset by paying it off in monthly instalments. The handset cost is split from the cost of service, and tends not to involve an upfront fee. At the end of the contract period, the customer has paid off the full cost of the device, and from then on (should they choose not to enter a new contract) their only ongoing payment is their monthly service charge.
- **Handset leasing** allows customers to lease a new handset through monthly instalments, which are again separate to their monthly service payments. For the same device, leasing presents a lower cost option than EIPs as the customer does not own the device and usually returns this to the operator at the end of the agreement.

Handset financing was first introduced in the US market in March 2013, when T-Mobile offered customers an EIP. The motivation behind this offer was to create visibility and transparency for the customer, in order for T-Mobile to gain subscribers in a competitive and increasingly saturated market. With its growing popularity, and the positive impact on the operator's financial KPIs, AT&T, Sprint and Verizon quickly followed suit, launching their own EIPs later in 2013. Subsequently, Sprint and T-Mobile introduced handset leasing to the market, offering similar plans at lower cost as a competitive lever to attract new customers.

Consumer benefits of handset financing

Handset financing has a number of intrinsic benefits over the subsidy model, explaining its rapid adoption within the US market:

- **No more upfront fees.** Handset financing plans typically allow customers to get the latest handset without paying an upfront fee.
- **More frequent device upgrades.** As the device is unbundled from the service cost, it is easier for operators to offer device upgrades mid-contract. AT&T's EIP – called Next – allows subscribers to upgrade as early as within two months of entering the contract, by trading in their current device and paying a lump sum of 50% or 80% of the device's retail price. Sprint's leasing plan – iPhone Forever – allows customers to upgrade after 12 months to the latest iPhone by trading in their current iPhone.
- **Customers pay less in the long run.** For EIPs, once the device-financing cost has been paid off, the customer continues to pay only the service cost. This is particularly appealing to more price-sensitive users who wish to keep using their device after it has been paid off. Under handset leasing, the monthly lease charge for the handset will be lower than under the subsidy or EIP models.
- **Clarity of tariffs.** By breaking the cost of the contract into separate payments for the handset and for service, customers can more easily compare and choose services between operators based on cost and perceived value.

These benefits, in concert with a sustained drive by the US operators to transition their customer bases away from subsidies to handset financing, have seen rapid adoption of the schemes within the US market. From their inception in 2013, around 75% of AT&T's contract smartphone base was on a no-device-subsidy plan by Q2 2016, up 11 percentage points from Q2 2015, while 49% of Sprint's contract connections base was on a device-financing agreement in Q2 2016, up 18 percentage points year-on-year.

Accounting for handset financing

The principal impact of the move to handset financing for mobile operators relates to differences in the accounting treatment of the various handset financing models, relative to the subsidy model. Under both EIPs and handset leasing, ARPU and service revenue decline, while equipment revenues rise. EBITDA increases (this is sustained under leasing, while it is only a one-off spike for EIPs, which then balances out with the EBITDA of a traditional subsidy over the term of the contract). Finally, the capex burden increases under handset financing.

	P&L			Cashflow statement
	Service revenues	**Equipment revenues**	**Opex**	**Capex**
Subsidy	Monthly payment (covering service and subsidised device cost)	Upfront fee*	Full handset cost*	Nil
EIP	Monthly service cost	Full handset revenue*	Full handset cost*	Full handset cost**
Leasing	Monthly service cost	Monthly handset cost	Zero handset cost	Full handset cost**

Table 1: Breakdown of the accounting treatment for subsidies, EIPs and leasing

*Recognised at inception of contract; **Recognised when operator acquires

Source: GSMA Intelligence

Under the subsidy model, the operator books the customer's monthly payments within service revenue on a rolling basis, with any one-off payments booked under non-recurring revenue as they occur. The full cost of the handset is booked under opex at the initiation of the contract; it is considered a subscriber acquisition cost.

In contrast, with EIPs, the operator books service revenue as it occurs, but books the entire revenue and cost of the device at the inception of the contract. It also books the capital cost of the device within its cash flow statement when it acquires the device. As a result, relative to the subsidy model:

- ARPU/service revenue declines
- equipment revenue spikes at the initiation of the contract (in excess of any one-off payments under the subsidy model)
- EBITDA margin spikes at the initiation of the contract (given the early revenue recognition linked to the sale of the handset) but is lower later in the contract
- capex spikes as the operator now classifies devices as a capital expense.

With handset leasing, operators book service revenue and device leasing revenue as it occurs, with no cost booked within opex (although the device is depreciated over the course of the contract). As with EIPs, the device is classified as a capital expense. As a result:

- ARPU/service revenue follows the same profile as an EIP
- equipment revenue is higher over the course of the contract than under the subsidy model, but lower than total equipment revenue booked under an EIP
- EBITDA margin is higher than for EIP (as the operator does not book the cost of the device under opex)
- capex spikes in the same manner as under an EIP.

Impact on operator KPIs

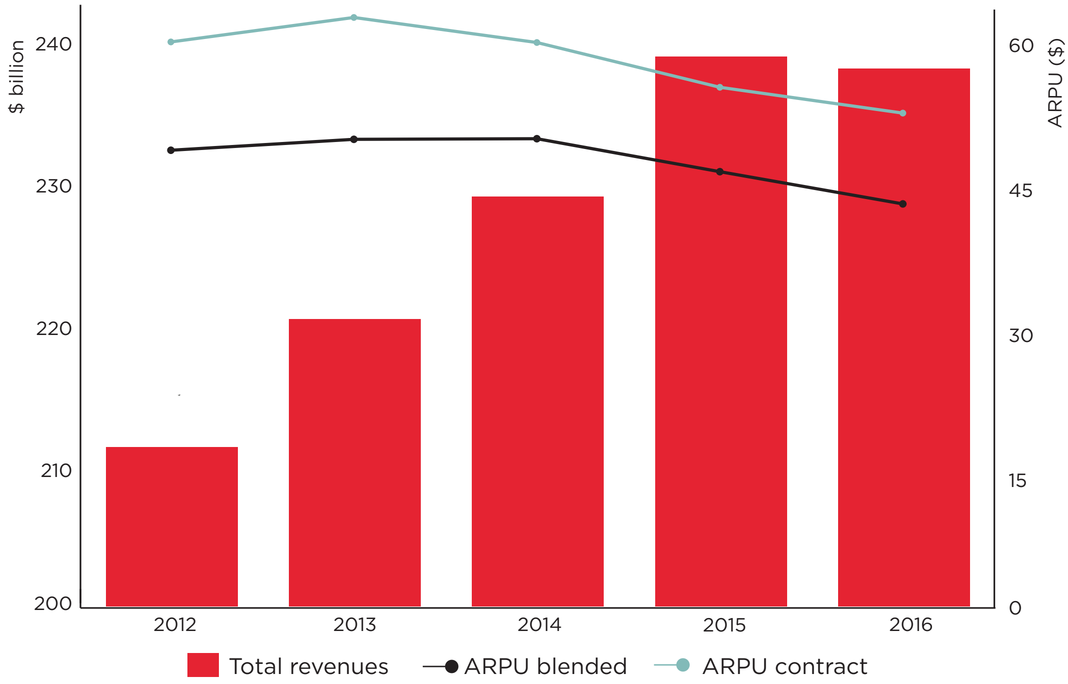

Figure 1: Annual US revenue and ARPU trend
Note: year ending Q3
Source: GSMA Intelligence

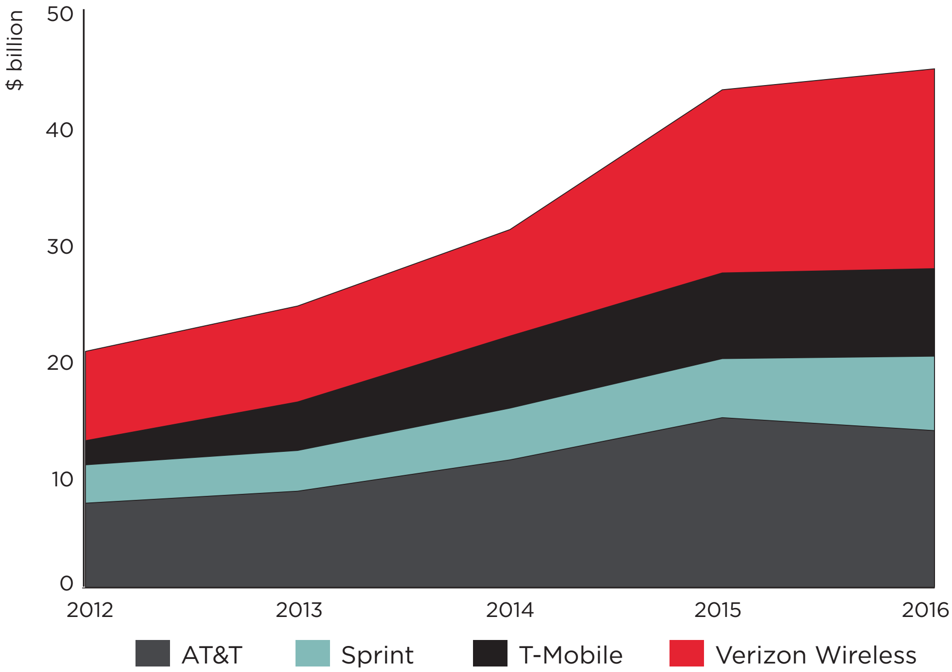

Figure 2: Annual equipment revenue (stacked)
Note: year ending Q3
Source: GSMA Intelligence

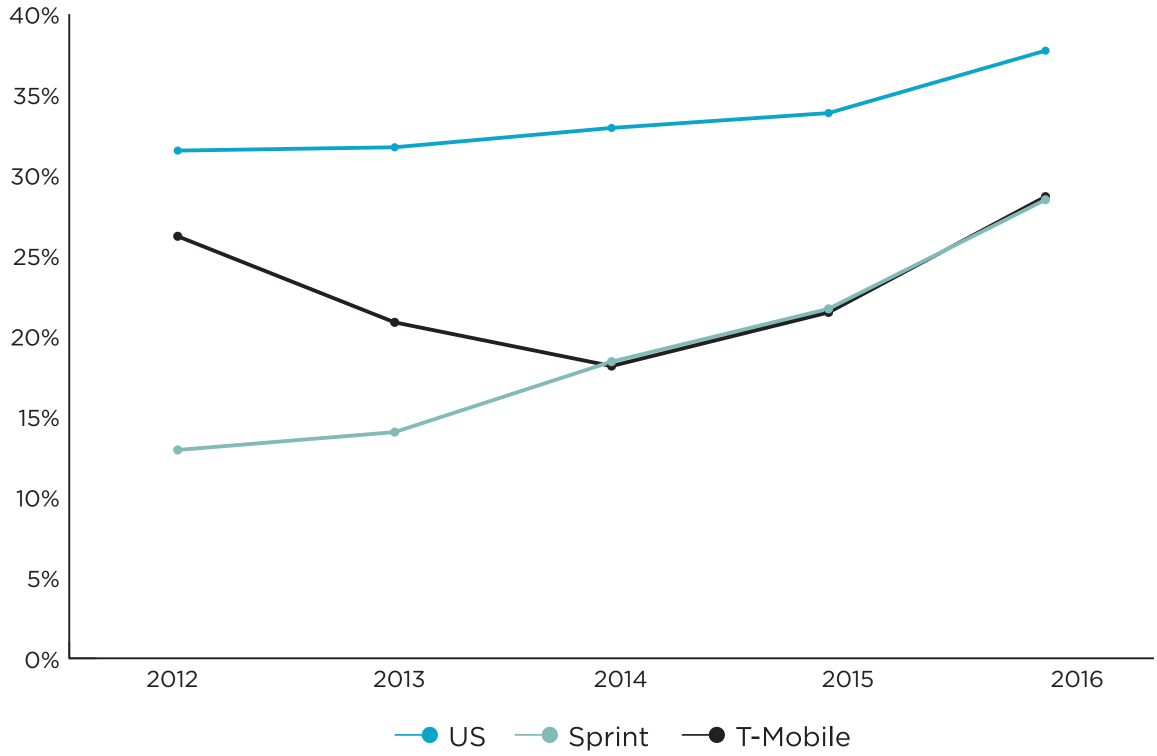

Figure 3: Annual EBITDA margin trend
Note: year ending Q3
Source: GSMA Intelligence

US: the 'perfect storm' for handset financing

The US successfully migrated from subsidies to handset financing for several reasons. The key factor was the desire among all the major US operators to promote handset financing in place of subsidies – all four national operators launched in the same year and began a rapid migration process. In a market where consumers were accustomed to paying upfront fees for high-end smartphones under the subsidy model, handset financing proved particularly popular by offering the latest smartphones for zero upfront cost. In addition, the scale and strong profitability of the big-four national US operators has allowed them to more easily fund the capital cost of handset financing, and to securitise contracts.

In other cases not all operators within a market have pursued handset financing with the same vigour, and it has often been offered as an alternative to subsidies rather than a replacement. Furthermore, not all markets charge upfront fees under the subsidy model, so there is less incentive for consumers to switch to a handset financing plan.

Operator benefits of handset financing

Supports a shortened handset replacement cycle

Splitting out customer payments for device and service has enabled operators to use handset financing as a means to accelerate handset replacement cycles. By targeting their customer base with the latest devices as they launch, operators can drive higher equipment revenues and EBITDA than under the subsidy model. For example, T-Mobile's EIP 'Jump!' allows subscribers to upgrade whenever they wish, by trading in their current device and paying half the original device cost minus what they have already paid. By providing this service, operators can also resell handsets at a higher price (under both EIPs and leasing plans) as the value of the returned handsets is higher.

Encourages consumers to upgrade to higher-end devices

By removing the upfront cost of high-end handsets such as Apple's iPhone, and spreading the cost over the contract term, operators are encouraging more consumers to trade up to higher-end devices. Consumers tend to be more sensitive to larger, one-off, upfront payments than relatively smaller increases in recurring monthly costs. As a result, operators will drive higher overall equipment revenues, while the proliferation of more high-end devices among their customer bases should lead to greater consumption of data services.

Impact of EIPs on operator's P&L is transitory, whereas leasing is EBITDA accretive

Due to the difference in the way EIPs are accounted for versus subsidies, they create an initial spike in revenue and therefore EBITDA, boosting the operator's EBITDA margin. However, over the term of the contract, all other things being equal, the impact of EIPs on revenues and EBITDA is identical to the subsidy model. As a result, under a mass migration of the customer base to EIPs, as has occurred in the US, the initial spike in revenue and EBITDA will be balanced out with relatively lower revenue and EBITDA as saturation takes effect.

Handset leasing, however, does not book any handset cost to opex; it involves a steady stream of payments over the contract term. It therefore boosts EBITDA relative to the subsidy model.

Risks of handset financing and operator responses

Disintermediation through handset purchases from non-operators

By separating out the monthly cost of service from the device, mobile operators leave themselves open to potential disintermediation. Apple has already launched its iPhone Upgrade Program in the US, a leasing scheme that allows subscribers to upgrade to the latest iPhone every 12 months. Under this model, Apple becomes the customer's sales touch-point, with the customer subscribing to an operator service via Apple.

This has the potential to dramatically reduce operator revenue and EBITDA, as it removes handset sales from the operator's P&L. In its Q2 2016 investor briefing, AT&T highlighted "lower sales volumes and bring-your-own-device subscribers" as the key factor behind wireless equipment revenues decreasing 5.5% to $3 billion. Should operators lose this vital customer touch-point, their ability to upsell and promote brand loyalty is reduced.

Operators have responded with promotional deals to gain and retain customers. For example, shortly after Apple launched its iPhone leasing plan, both Sprint and T-Mobile launched promotional offers for leasing an iPhone. Despite the presence of external competitors, operator storefronts remain dominant in customer purchases of new devices/contracts, and operators retain a much greater retail presence. AT&T, for instance, has more than 2,200 company-owned retail stores in the US, compared to Apple's 270.

Potential for greater competition on service costs

By separating out the cost of the device, customers can more clearly link the cost of service (excluding handset costs) to the perceived value of this service. It also creates more clarity for those tracking the performance of the market to be able to separate out these two revenue streams. This improved visibility can put further pressure on operators to compete on price.

Capex burden rises for operators under handset financing

As device purchases under handset financing are categorised as capital expenses, operator cash flow will come under increasing pressure. Operators of scale have a better chance of sustaining handset financing offers over smaller operators since they can purchase handsets more freely and leverage more easily than those with cash constraints.

This cash burden has prompted the US operators to securitise their handset sales; this assures operators receive the majority of the cash value of their handset financing contracts up-front, instead of waiting until the end of the contract to fully recognise the cash from the handset sale.

Handset leasing is more complex and risky to implement than EIPs

Under handset leasing, the operator retains ownership of the device over the course of the contract, which in itself presents a number of risks. Firstly, as customers pay a lower amount per month under handset leasing compared to an EIP, operators face more risk of bad debt (customers defaulting on payments) over the course of the contract. T-Mobile is already experiencing this, as it booked $338 million in bad debt during the first half of 2016, up from $210 million in the first half of 2013.

Secondly, once the contract expires, the operator must then look to obtain a return on the depreciated handset – an operation that determines whether they book a profit or loss, or break even in terms of the revenue gained from it. This added risk will not appeal to all operators. Sprint has benefitted in this regard from its relationship with SoftBank, owner of Brightstar, a company that distributes second-hand devices. This has been the primary driver behind its pursuit of handset leasing as its main model of handset financing.

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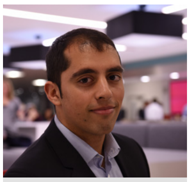

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Kavi is responsible for modelling and forecasting global mobile financial measures. Prior to joining GSMA, Kavi graduated from the University of Warwick where he achieved a BSc (Hons) in Mathematics.

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