

BANGO

MOBILE COMMUNICATIONS

BGO.L

181.5p

Market Cap: £126.6m

SHARE PRICE (p)



12m high/low

273p/95.5p

Source: LSE Data

KEY INFORMATION

Enterprise value	£121.0m
Index/market	FTSE AIM
Next news	FY 17 results, Mar 18
Gearing	N/A
Interest cover	N/A

BANGO IS A RESEARCH CLIENT OF PROGRESSIVE

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Doubling Down on Platform Leadership Strategy

This note aims to summarise the information delivered at Bango's recent Strategy Day, and to analyse the key messages. Our analysis focuses on four areas – the group's strategy, the data opportunity and Audiens acquisition, an update on the Japanese business and the emerging resale and bundling opportunity. The presentation was well attended and provided a useful opportunity to meet the broader Bango executive team. We continue to believe that Bango is well positioned to deliver on its targets, and we confirm our forecasts following the event.

- Strategy continues to deliver:** Bango's stated goal is to become the industry standard platform chosen by leading global merchants to deliver mobile payments to everyone. We believe the group's ongoing success in attracting tier-1 merchants to the Bango Platform and sustained growth in End User Spend ("EUS") demonstrate that management continues to deliver on its strategy.
- Capturing the data opportunity:** Given its centrality to its customers' businesses, the Bango Platform generates a significant amount of data about mobile commerce. With advertising increasingly moving to mobile devices, this data is increasingly valuable. With the recent Audiens acquisition, Bango will be selling aggregated, anonymised internally-generated data to advertisers to exploit the growth in mobile advertising.
- Update on retail DCB in Japan:** Bango launched their first Direct Carrier Billing ("DCB") for retail (*i.e.* for physical goods) in 2017 with Amazon Japan. Eight months on from the announcement, the Bango Platform is successfully field-proven to deal with retail DCB at scale. Management is currently evaluating several future retail DCB launches.
- An emerging opportunity from resale and bundling:** Following the Amazon/Airtel announcement in January 2018, we see a number of use cases for Bango's new resale technology and understand that resale and bundling services are immediately available in all territories where the Bango Platform is present.

The recent past has seen impressive growth in the Bango business, with the key EUS metric having more than doubled in each of the last three years. The Strategy Day was reassuring in terms of the group's strategic positioning and ability to sustain momentum, particularly via the exploitation of emerging growth opportunities in data, DCB for physical goods and from resale and bundling.

YEAR TO DECEMBER	2014	2015	2016	2017E	2018E
End user spend (£m)	25.2	44.7	132.3	266.0	509.4
Revenue (£m)	5.1	1.3	2.6	3.7	6.7
Adjusted EBITDA (£m)	-3.7	-3.1	-2.4	-2.0	1.0
Adjusted PBT (£m)	-5.4	-5.0	-4.1	-4.0	-1.0
Adjusted EPS (p)	-8.5	-9.5	-6.3	-6.1	-1.5
EV/ Adj. EBITDA (x)	n/a	n/a	n/a	n/a	n/a
P/E (x)	n/a	n/a	n/a	n/a	n/a

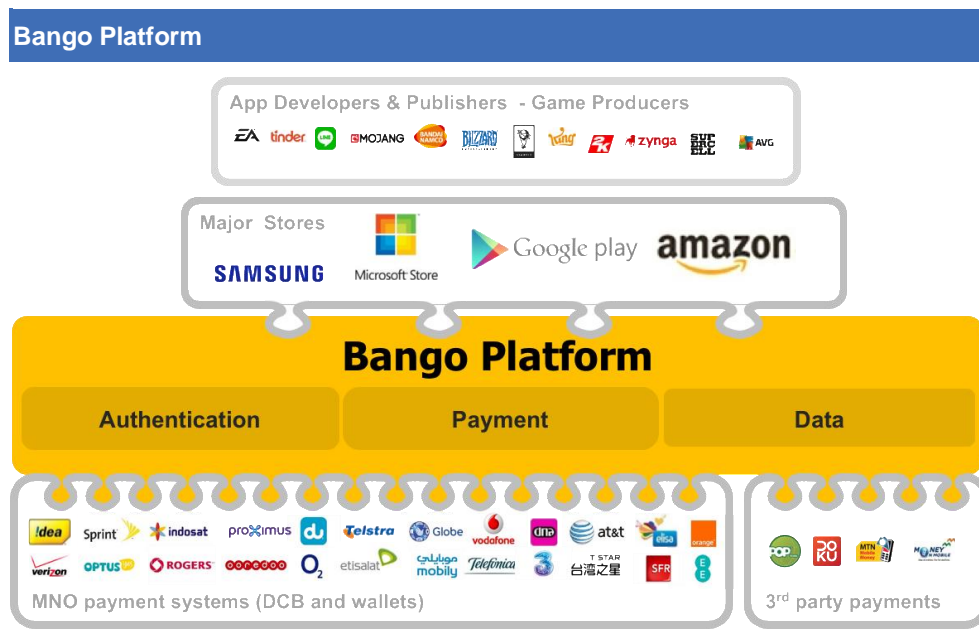
Source: Company Information and Progressive Equity Research estimates

Bango continues to deliver on its strategy

A quick recap on strategy...

Bango's stated goal is to become the standard platform chosen by leading global merchants to deliver mobile payments to everyone. The Bango Platform ("BP") is designed to ensure that payment can be collected for any content or service, from any internet enabled device, using any "alternative" payment method.

The following chart summarises the role of the Bango Platform.

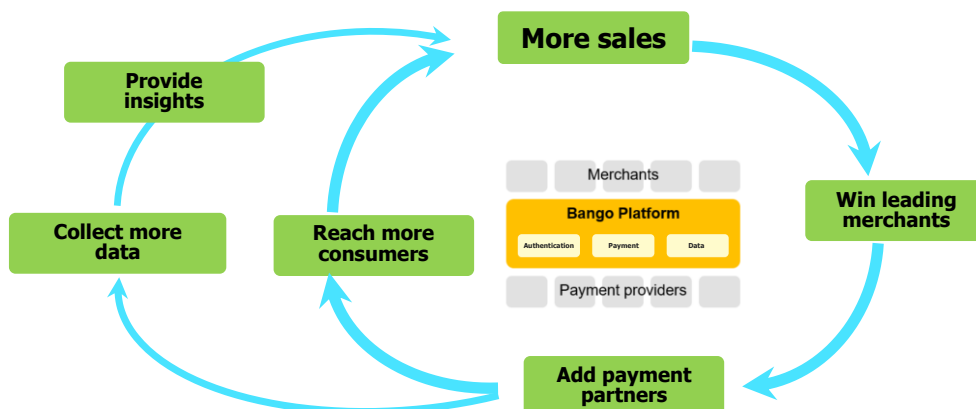


Source: Company data

The platform provides open APIs¹ and can be used by global stores, merchants and other online service providers. The following chart summarises the group's strategy.

¹ APIs (application programming interfaces) provide a way to connect computer software components. APIs make it possible for organizations to open their backend data and functionality for reuse in new application services. An API achieves this by facilitating interactions between code modules, applications and backend IT systems. The API specifies the way in which these different software components can interact with each other and enables content and data to be shared between components. (Definition courtesy of <http://www.apiacademy.co/resources/api-strategy-lesson-101-what-is-an-api/>)

Bango strategy – “a virtuous strategic circle”



Source: Company data

In our view, the group is benefitting from a “virtuous strategic circle”. The focus on adding new merchants and payment partners improves customer engagement for both sets of partners. This in turn drives increased revenues and enriches the BP with more payment-related data, which in turn helps win new merchants and a greater share of merchant business.

Over recent years, Bango has added a number of value-added services to its offering, particularly the Bango Boost, Bango Dashboard and Bango Grid products. These use their payment data assets to drive sales for partners. We believe these are a key source of competitive advantage for Bango, exploiting the broad reach of the platform and adding significant value for merchants and Mobile Network Operator (“MNO”) customers.

To quote Bango themselves – “the more players that adopt the Bango Platform, the more valuable the Bango Platform becomes for all players”

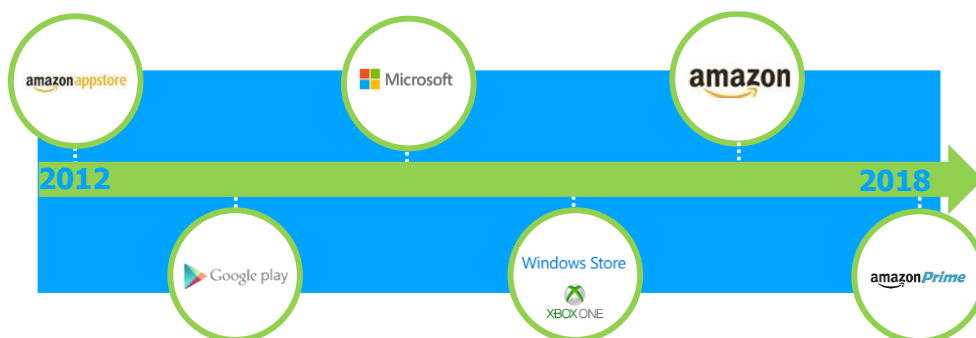
Merchant wins and EUS demonstrate delivery

We believe two trends in particular demonstrate that Bango’s strategy continues to deliver. Firstly, that Bango continues to attract leading global merchants that use the Bango Platform for an increasing amount of their business and, secondly, the growth in volume processed over the platform. In our view the additional focus on the data asset is an intelligent way to underpin these two trends.

Relationships with the leading global merchants

The following chart demonstrates Bango’s recent history of wins, since focusing its strategy on tier-1 merchants such as app stores.

Bango Platform – Leading merchants 2012-2018



Source: Company data

As the chart shows, some of the world’s leading merchants use the Bango Platform. Its tier-1 merchant customer base includes Amazon, Google and Microsoft. As the chart also demonstrates, Bango has also been successful in deepening the relationships with its partners – particularly Amazon. The Amazon relationship was originally DCB for digital content via the Amazon Appstore. This has been expanded to include DCB for physical goods and most recently, resale services for Amazon Prime.

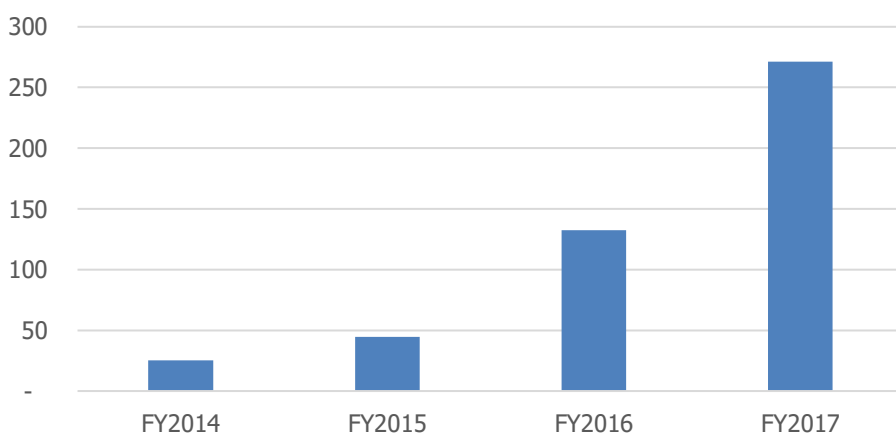
As demonstrated in the platform chart on page 2, on the MNO side, Bango partners with many of the world’s leading MNOs, including NTT Docomo, Verizon Wireless, DT Group, SingTel/Airtel, MTN, Orange, AT&T, Telefonica and Vodafone.

EUS has seen impressive growth

End User Spend (EUS) represents the total value of transactions from merchant and app store sales through the Bango Platform. It is management’s primary KPI for assessing business performance.

The following chart shows the recent growth in EUS.

Bango EUS 2014 – 2017 (£m)



Source: Company data

As the chart demonstrates, EUS has shown impressive growth. At the end of 2017, the exit EUS run rate was substantially greater than £400m/year.

In our view this is a creditworthy achievement and reflects growth in the three key drivers of End User Spend:

- More payment routes
- More users; and
- More content and services, for example the extension of the Bango Platform beyond DCB for digital content to include physical goods.

EUS growth has also benefitted from new product developments such as Bango Boost, Bango Dashboard and resale and bundling technology.

An emerging data opportunity

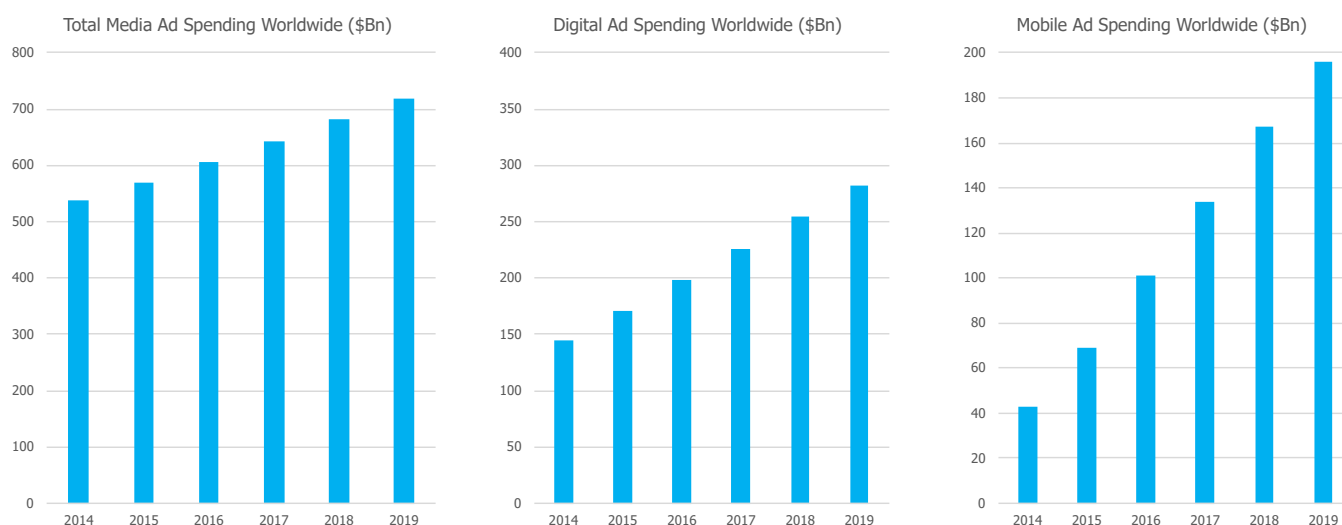
To quote a recent Economist article², “data is the world’s most valuable resource”. Smartphones and the internet have made data abundant, ubiquitous and far more valuable. Meanwhile, artificial-intelligence (AI) techniques such as machine learning extract more value from data. Algorithms can predict such diverse outcomes such as when a customer is ready to buy, a jet-engine needs servicing or a person is at risk of a disease.

In our view, Bango stands to be a major beneficiary of the data revolution given its role as a key intermediary between e-commerce merchants and MNOs. The BP generates a significant volume of data, and this is increasingly valuable to marketers – especially given the increasing importance of mobile marketing to advertisers.

Advertising is going mobile

The following charts show expected trends in worldwide advertising spend out to 2019.

Trends in advertising spend



Source: eMarketer

Growth in mobile advertising spend is being driven by consumer adoption of mobile devices:

- In emerging and developing markets, many consumers are accessing the internet mobile-first and mobile-only.
- In the developed world, mobile penetration exceeds 100%, so has significant reach.

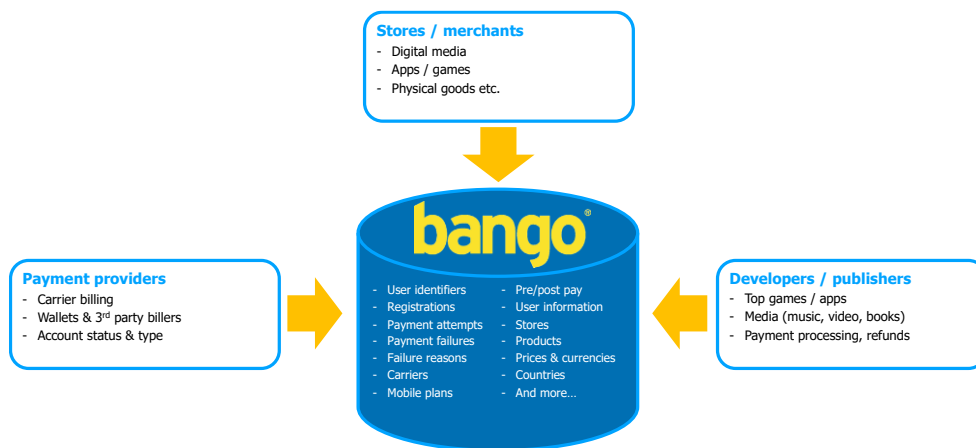
Leading advertisers are allocating their digital expenditure to mobile accordingly. As a result, we believe data providing customer insight on mobile user spending will become increasingly valuable to advertisers.

² <https://www.economist.com/news/leaders/21721656-data-economy-demands-new-approach-antitrust-rules-worlds-most-valuable-resource>

The BP generates significant volumes of data

Perhaps unsurprisingly given its place as a key business facilitator for some of the world's leading e-commerce merchants and MNOs, the BP generates and securely stores significant volumes of data, and much of it provides exclusive customer insight. Some of the key data types within the BP are summarised in the following chart.

Data sources



Source: Company data

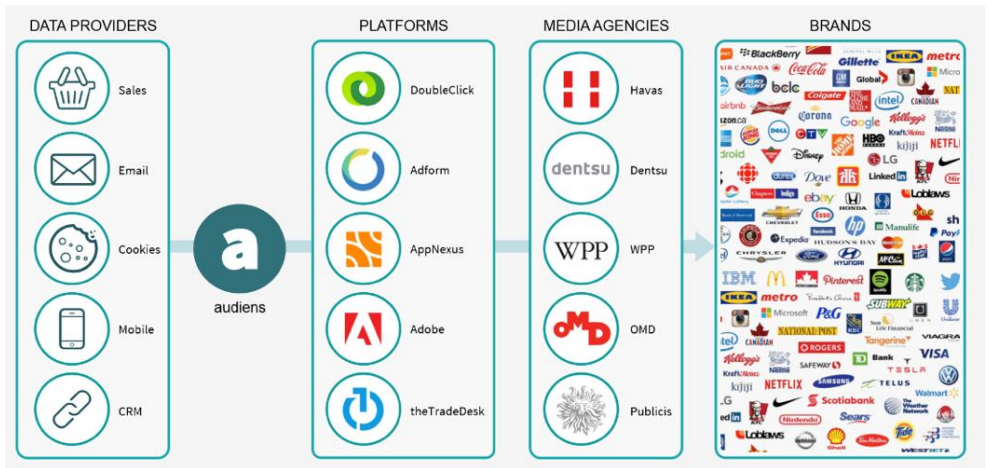
Over recent years, Bango has developed a strong suite of value-added services that exploit the value of its data. The Bango Grid, Bango Boost and Bango Dashboard products are designed to accelerate DCB customer and revenue growth, thereby creating value for both Bango and its clients.

Audiens acquisition to supercharge data exploitation

In January 2018, Bango announced the acquisition of Audiens SRL, a cloud-based Customer Data Platform ("CDP") provider that collects, organises and analyses data. Said data is then made available as a service to publishers and advertisers. The cost of the acquisition was £2.8m, payable in a combination of cash, shares and warrants.

The following chart describes the role of a CDP.

The role of a CDP

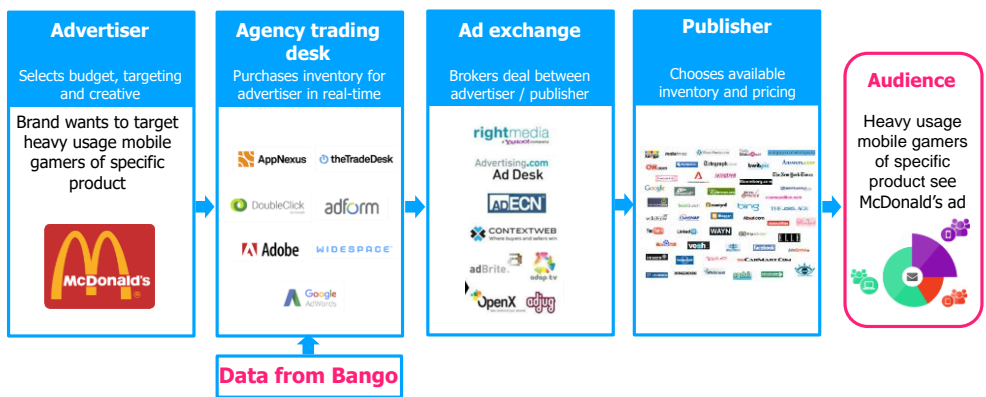


Source: Company data

CDP's combine data collected from many sources to create customized audience segmenting, which is made available to advertisers through a range of third party advertising trading desks. Advertisers can then market more accurately to relevant users based on a more comprehensive analysis of customer activities and capabilities, enabling data-driven decision making, yielding a higher ROI.

Audiens is based in Italy. Two of the three Italian MNOs are existing customers. We believe this direct experience with MNOs aligns Audiens well alongside Bango, and we see the acquisition as having excellent strategic fit with Bango's existing business. The following chart summarises the connection between Bango and Audiens.

Bango and Audiens



Source: Company data

Via the Audiens platform, Bango will essentially sell aggregated, anonymised internally generated data to advertisers.

Japan demonstrates applicability of DCB for retail goods

In June 2017, Bango announced the launch of DCB with Amazon Japan for the sale of all goods sold through the Amazon.jp store to c145m NTT DoCoMo and Au (KDDI) mobile subscribers. The recent investor event provided an update on progress in Japan.

Two key topics emerged, firstly that the BP is now field-proven to manage DCB for retail goods for the world's leading online retailer, and that Japan is expected to be the first of many launches in Asia for a number of merchants in retail.

Bango Platform proven to handle physical goods complexities

Bango launched DCB with Amazon Japan in June 2017. Our view at the time was the deal represented a material opportunity for Bango, and the tie-up with a tier-1 internet player such as Amazon was a significant vote of confidence in Bango and the BP, more so given Amazon's intense focus on customer service.

Eight months on from the announcement, the Bango Platform has proven adept at dealing with the many complexities of DCB for physical goods, and at scale. Some of the key complications are shown in the following chart.

Complexities of DCB for physical goods



Source: Company data

DCB for digital content typically boils down to “buy-bill-deliver” to complete a transaction which is usually completed within a few seconds. For physical goods, the process can be significantly more complex, involving multi-part shipping and partial refunds.

Firstly, the merchant may require the user to log-in to pay (think of the typical web shopping experience). The process must then manage individual items contained within a shopping cart, and these items may be sourced from different suppliers and also may be in different physical locations. Depending on the category of goods, different sales tax treatments may apply.

The platform must be capable of allowing part billing for partial dispatches of orders, and be able to deal with refunds and chargebacks, and also deal with individual tax calculations.

Japan expected to be the first of several retail DCB launches

Japan is Bango's first market for retail DCB. Management revealed that they are currently evaluating a number of territories in Asia for future retail DCB launches, including Hong Kong, South Korea, Taiwan and Singapore. Each of these have a material e-commerce market, and Bango has existing DCB relationships with MNOs in many of them. Management gave no indication on specific progress towards launch in any of the four territories. However, their market evaluation criteria were revealed.

- Highly connected – high internet usage
- Mobile centric – mobile is the primary device for internet access
- High disposable income
- High ARPU

Resale and bundling

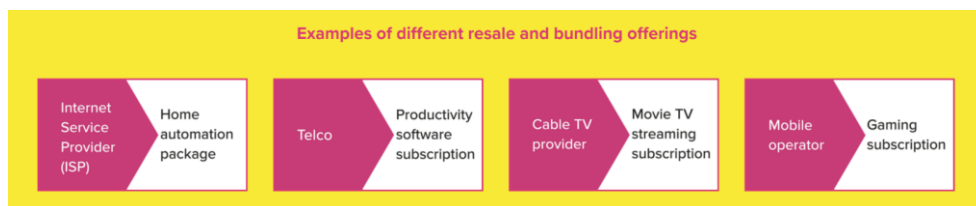
In January 2018, Bango announced the first deployment of its resale and bundling technology with Amazon in India, allowing certain Bharti Airtel customers to activate a trial of Amazon Prime. In our view, the deal demonstrates the versatility of the BP, and certainly with this deployment, increases Bango's exposure to a sizeable mobile and e-commerce market (*note Bango launched India's first Google Play DCB in 2016*).

We understand that resale and bundling services are available in all territories where the BP is present and can see a number of use cases for resale for the technology. We would therefore be unsurprised to see further contract announcements in the near future. Bango's Strategy Day provided further colour on the mechanics of service delivery.

What is resale and bundling?

Essentially, the Bango Platform has been extended beyond DCB to allow resellers to offer third-party services with no additional cost, at a reduced price or as part of a bundled offer. The following chart demonstrates some further possible use cases.

Sample resale / bundling use cases



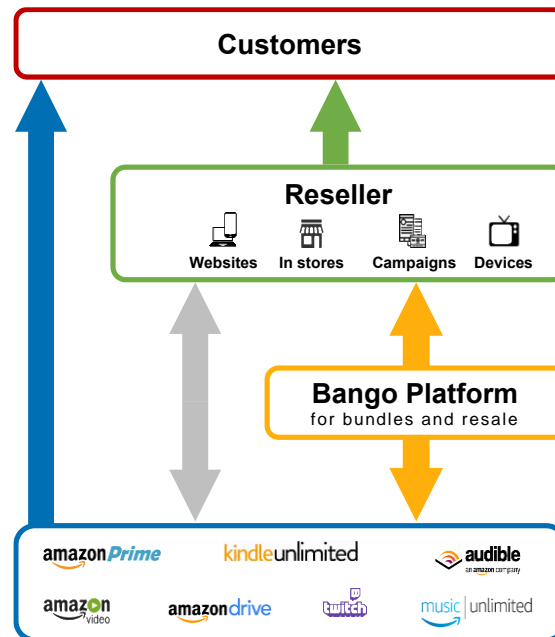
Source: Company data

In the launch case – India – certain Airtel customers can activate a 12-month trial of the Amazon Prime service. As the chart shows, the BP supports a number of use cases for bundling across a number of different types of customer. The key point being that customers can increase distribution and sales by using the BP.

How does the technology work?

The following chart demonstrates the functionality of Bango's resale technology

Bango's resale and bundling technology



Source: Company data

Bango is paid for transactions across Direct Carrier Billing, resale and bundling, and any other services such as identification or customer information. The platform can manage subscription models, and also one-time licencing transactions, with full synchronisation of license entitlements. Pricing is based on the services provided by Bango, even when resellers offer free periods or promotional bundles. EUS for a bundled product is set at the "street price" of the standalone product.

Although management gave no forecast of anticipated business volume from resale, they do expect the technology to be a "significant" generator of new revenue.

Summary & Conclusion

Overall, we believe Bango's Strategy Day reassured on the group's strategic capabilities and ability to deliver on its targets. In summary, we draw the following key conclusions from the event:

- **The Bango strategy continues to deliver** – as evidenced by sustained growth in EUS and the group's track record of adding tier-1 merchants to the platform.
- **Bango is well positioned to monetise internally generated data** – Mobile is increasingly important to developers, merchants and advertisers and the Audiens acquisition positions Bango well to capitalize on the data opportunity.
- **Amazon Japan demonstrates the platform's capability in retail DCB** – Eight months from launch, the Bango Platform is field-proven to process retail DCB at scale, and with the most demanding customers.
- **Resale and bundling represent a further growth opportunity** – a further extension of the Bango offering, there are a number of use cases for resale technology. Bundling and resale therefore represent an additional growth opportunity and will also enrich the Bango Platform with information about how customers order and pay online.

SUMMARY FINANCIALS

Profit & Loss	FY-13A	FY-14A	FY-15A	FY-16A	FY-17E	FY18E
End-user Spend (non-GAAP)	15.6	25.2	44.7	132.3	266.0	509.4
Revenue	8.8	5.1	1.3	2.6	3.7	6.7
Gross Profit	2.1	1.3	1.3	2.6	3.7	6.7
Adj EBITDA	(3.0)	(3.7)	(3.1)	(2.4)	(2.0)	1.0
Reported PBT	(4.9)	(5.4)	(5.0)	(4.7)	(4.2)	(1.2)
PBT before exceptionals and AAG	(4.9)	(5.4)	(5.0)	(4.1)	(4.0)	(1.0)
Fully adj PBT	(4.9)	(5.4)	(5.0)	(4.1)	(4.0)	(1.0)
NOPAT	(2.5)	(3.0)	1.0	(2.9)	(2.5)	0.4
Reported EPS (p)	(10.5)	(11)	(9.0)	(6.8)	(6.0)	(1.4)
EPS before exceptionals and AAG (p)	(7.9)	(8.3)	2.6	(6.3)	(6.1)	(1.5)
Fully adj EPS (p)	(8.2)	(8.5)	(9.5)	(6.3)	(6.1)	(1.5)
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow & Balance sheet	FY-13A	FY-14A	FY-15A	FY-16A	FY-17E	FY18E
Operating cash flow	(2.8)	(3.4)	(3.5)	(2.6)	(1.9)	2.9
Free Cash flow £m	(4.0)	(4.2)	(4.1)	(6.0)	(2.8)	2.0
FCF per share p	(8.9)	(8.9)	(7.8)	(9.2)	(4.3)	3.0
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0
Disposals	0.0	0.0	0.0	0.0	0.0	0.0
Shares issued	6.6	5.7	10.5	0.1	0.0	0.0
Net cash flow	2.9	1.1	5.9	(6.2)	(2.7)	2.1
Overdrafts / borrowings	(0.4)	(0.6)	(0.4)	(0.1)	(0.2)	(0.3)
Cash & equivalents	5.1	6.3	12.1	5.7	3.0	5.0
Net (Debt)/Cash	4.7	5.7	11.8	5.6	2.8	4.8
NAV and returns	FY-13A	FY-14A	FY-15A	FY-16A	FY-17E	FY18E
Net asset value	8.9	9.8	15.9	12.4	10.6	9.7
NAV/share (p)	19.4	18.8	24.7	19.0	16.2	14.8
Net Tangible Asset Value	5.5	6.3	12.5	6.3	2.9	1.4
NTAV/share (p)	12.0	12.1	19.3	9.7	4.4	2.2
Average equity	8.9	9.3	12.9	14.1	11.5	10.1
Post-tax ROE (%)	-53.5%	-55.2%	-37.4%	-31.2%	-34.2%	-9.3%
Metrics	FY-13A	FY-14A	FY-15A	FY-16A	FY-17E	FY18E
EUS growth	<i>n.a.</i>	61.8%	77.5%	196.1%	101.1%	91.5%
Revenue growth	<i>n.a.</i>	-42.0%	-74.5%	101.8%	42.9%	78.0%
Adj EBIT growth	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Adj PBT growth	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Adj EPS growth	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Margin on EUS	23.5%	26.3%	97.5%	99.7%	100.0%	100.0%
Valuation	FY-13A	FY-14A	FY-15A	FY-16A	FY-17E	FY18E
EV/Sales	13.8	23.8	93.1	46.1	32.3	18.1
EV/EBITDA	(40.1)	(32.9)	(38.5)	(50.0)	(62.0)	123.3
EV/NOPAT	(49.1)	(39.8)	119.1	(41.4)	(48.2)	308.2
PER	(22.2)	(21.3)	(19.2)	(28.7)	(29.7)	(119.1)
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield	-2.2%	-2.3%	-2.3%	-3.3%	-1.5%	1.1%

Source: Company information, Progressive Equity Research estimates

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