PROGRESSIVE EQUITY RESEARCH

18 September 2018

BANGO

SOFTWARE AND COMPUTER SERVICES

BGO.L

163p

Market Cap: £114.4m

SHARE PRICE (p)

12m high/low	273.5p/146p

Source: LSE Data, priced 17/9/18

KEY INFORMATION

Enterprise value	£109.8m
Index/market	AIM
Next news	Trading update, Jan-19
Gearing	N/A
Interest cover	N/A

BANGO IS A RESEARCH CLIENT OF PROGRESSIVE

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Strong growth in payments, investment in data

Bango has reported solid interim results in our view. The payments business grew strongly, with End User Spend growth of 138% YoY, alongside a first full accounting period of positive EBITDA. The data business (including Audiens) is making good progress, and overall, we believe the group continues to deliver solid operational momentum. The outlook remains upbeat, giving confidence in H2 financial performance.

- **Impressive EUS growth, maiden positive half-year EBITDA:** H1 2018A saw EUS growth of 138%, reflecting expansion from existing Direct Carrier Billing ("DCB") routes, the addition of new DCB and wallet routes, and new merchants to the Bango Platform. Cost discipline was once again strong, with a £570k reduction in opex within the payments business resulting in a first full accounting period of positive EBITDA.
- **Good progress in data:** Audiens SRL, the cloud-based Customer Data Platform provider acquired in Jan-18 is already contributing c16% of group revenue. Investment in the data business was the primary cause of the group reporting a H1 2018A EBITDA loss of £0.9m. Management had previously flagged that the post-Audiens acquisition period would see material investment in the data business but confirmed their expectation of a positive EBITDA contribution within twelve months.
- **Operational momentum remains solid:** H1 2018A saw a number of new DCB routes added to the platform, notably with the Google Play Store in Africa and Latin America. Bango also expanded the use of its billing integration technology in the UK, US and India, enabling customers to sign up for Amazon Prime services. Bango was chosen by music streaming service Pandora for its mobile operator launch.
- **Positive outlook, well-funded:** The release contains a number of positive comments on the outlook, with the now four-year trend of EUS at least doubling every twelve months expected to continue and Audiens expected to turn EBITDA positive in the near term. Management also re-iterated their view that the group's cash position (£5.9m) is sufficient to fund operations through to cash generation and will provide headroom for growth and investment in the Bango Platform.

We leave earnings estimates unchanged following the release. Overall, we believe the continuing momentum in the payments business and expected move to positive EBITDA in the data business position Bango to meet our FY 2018E forecasts of EBITDA breakeven and positive cash generation.

FYE DEC (£M)	2015	2016	2017	2018E	2019E
EUS (Non-GAAP)	**44.7**	**132.3**	**271.4**	**540.0**	**1,404.0**
Revenue	**1.3**	**2.6**	**4.2**	**7.1**	**11.3**
Adj EBITDA	**(3.1)**	**(2.4)**	**(1.6)**	**1.0**	**4.3**
Fully adj PBT	**(5.0)**	**(4.1)**	**(3.6)**	**(1.0)**	**2.0**
Fully adj EPS	**(9.5)**	**(6.3)**	**(5.5)**	**(1.5)**	**2.8**
EV/EBITDA	**(34.9)**	**(45.3)**	**(70.0)**	**115.2**	**25.8**
PER	**N/A**	**N/A**	**N/A**	**N/A**	**58.1**

Source: Company Information and Progressive Equity Research estimates

H1 2018A results

Growth

Payments business

End User Spend (EUS) is the value of transactions processed through the Bango Platform ("BP"). H1 2018A EUS was £220m, more than double the £92.3m H1 2017A figure. At 138%, EUS saw a material acceleration in growth YoY versus the FY2017A figure of 105%. delivered in H2 2017.

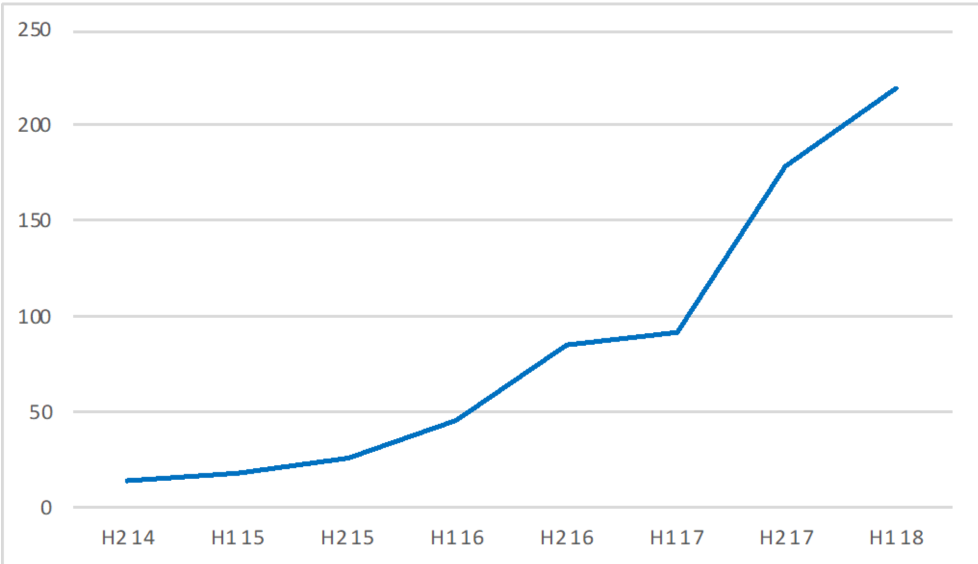
Growth has been driven by a combination of:

- Increased customer spending via existing Direct Carrier Billing ("DCB") routes
- First contributions from newly activated Google Play routes in Africa and South America. Note, Bango launched the first ever DCB route in South America (in our view another example of Bango opening up new markets following previous market first launches for Google Play DCB routes including India and Africa)
- The addition of other new DCB and wallet routes and new merchants to the BP.
- New billing integrations for Mobile Network Operators ("MNO"s) with Pandora in the US, and Amazon Prime services in India, the UK and US.

These are all enhanced by the Bango Platform's data and insights, which grow users and revenues across routes.

EUS has at least doubled over the past four years. To quantify that achievement, H1 2013A EUS was £6.6m. Five years later, the same metric reached £220m. The following chart demonstrates graphically recent growth in EUS.

Bango - reported EUS (£m)



Source: Company data

Data business

Bango's H1 2018A results include a five-month contribution from Audiens SRL, the cloud-based Customer Data Platform ("CDP") provider acquired in January 2018. As this is the first contribution to group financials from this new business there is no historic metric against which to measure growth.

Revenue

Payments business

Bango reported H1 2018A payment activity revenue growth of 29%. Clearly this lags EUS growth, and the deficit has two primary causes: 1) Contract renegotiation with one particular MNO and 2) the adoption of IFRS 15.

The contract renegotiation with a particular MNO had a negative £0.5m revenue impact in the first half of FY2018E and is expected to have a £0.2m impact in the second. Bango has agreed to a reduction in payment activity revenue, in order to generate an increase in the data monetisation revenue opportunity. Net/net, management expect EUS to grow. Without the renegotiation, payment activity revenue growth would have been 58%.

At first glance, a decline in revenue will appear to some as somewhat negative, even if its cause was freely negotiated. However, Bango's strategy has long been to maximise payment volumes processed by the Bango Platform. Accepting a lower fee is likely to drive additional volume across the platform. Additional volume generates additional data and greater insight into customer behaviour, which Bango expects to successfully monetise.

We see the renegotiation as a sign of management's confidence in its ability to monetise the data opportunity.

Bango has also adopted IFRS 15. Under the new accounting standard, revenue from annual subscription services with Amazon, Pandora and others are spread over the year. Previously, these revenues would have been recorded in the period when the income was received. The result that some revenues that would have been recorded in the first half are now being spread into 2019.

Data business

In our view, Audiens has made a solid start to life as part of the Bango group. H1 2018A data revenues of £418k represent 15.9% of total group turnover, and this reflects only five months of consolidation. Audiens is already contributing the bulk of Bango's data revenues.

Having successfully operated the BP for a number of years, Bango management had identified that the data gathered by the BP from processing payments from hundreds of millions of transactions would be highly valuable to brands and marketing agencies. We believe the Audiens acquisition was a bold move, opening up additional material opportunities to leverage the Bango Platform, and on an accelerated timetable. As noted in the results announcement, the acquisition has also brought forward the launch of a data monetisation business by around twelve months.

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 acquisition of Audiens business was therefore strategically sensible and has accelerated Bango's ability to monetise the (*internal*) data generated by the BP. In addition to its state-of-the-art payment platform, the group now goes to market with an offering that significantly improves developer's and MNOs' marketing activities via the provision of detailed and segmented insight into customers' demographics, location, device history and purchasing trends.

Note that data is anonymised, with only general audiences being presented, and fully compliant with relevant data safeguarding regulations such as GDPR.

(For further analysis of the Audiens business, see Bango: Doubling Down on Platform Leadership Strategy. Progressive Equity Research 07/02/18)

H1 2018A vs FY 2018E

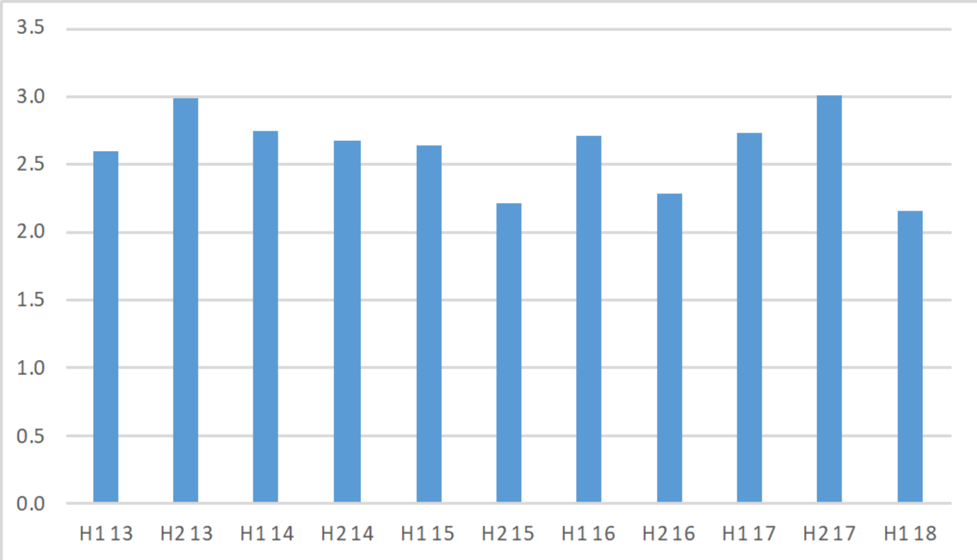
H1 2018A group revenue of £2.63m represents 37% of our FY 2018E estimate. With triple-digit growth in EUS expected to continue into the second half, alongside a full contribution from the data business in the upcoming period, we remain comfortable with our expectation of the H2 2018E revenue outcome.

Operating costs

Bango reported H1 2018A total opex of £3.3m. This was in line with management forecasts, although £580k higher than H1 2017A. The increase reflects investment in the data business and masks a significant improvement in operational efficiency in the payment business. Payment business opex saw a significant decline to £2.2m (H1 2017A £2.7m), with spend levels benefitting from previous years R&D to reduce the costs of platform operation and transaction processing.

New opex spending is focused around sales and marketing for the new data business and on development work in integrating Audiens CDP into the Bango Platform.

Bango – Payment business opex (£m)



Source: Company data

Management has a strong history of cost control in our view, and we continue to believe that against the continuing backdrop of stellar EUS growth, stable opex in the payments business demonstrates the high degree of operational leverage in the business.

Profitability

H1 2018A headline adjusted LBITDA saw a £110k improvement versus H1 2017 to £0.9m. With the core payments business reporting a maiden positive EBITDA for the half, investment in the data business was the primary cause of the negative overall group figure.

The negative contribution to group financials from the data business may be a concern to some. However, management has consistently stated that considerable investment would be made in the data business following the Audiens acquisition– notably at the Jan-18 strategy day, and the 2018 AGM. Indeed, we recall that when prompted at the Strategy day, management confirmed the Audiens fundraise exceeded the cost of the acquisition to allow further investment in data business.

H1 2018A vs FY 2018E

Our FY 2018E group EBITDA forecast of £1m implies a c£2m EBITDA H2 2018E. Clearly this is a material delta given the H1 2018A £0.9m loss.

As highlighted in the announcement, management believe the data business will turn EBITDA positive within the next twelve months. Their view is based upon Audiens' new business pipeline, together with revenue synergies from the integration of Audiens into the existing business. With momentum and cost control remaining strong in the payments business, we remain comfortable with our forecast of a positive FY 2018E group EBITDA.

Cash flow and position

Bango reported a closing H1 2018A gross cash position of £5.88m. This represents a c£1m inflow in the half, compared with a £141k outflow during H1 2017A.

Bango has been investing in R&D to increase efficiency of existing infrastructure in order to increase capacity, with reduced spending on new hardware. In H2 2018E, we expect a slight increase vs the first half.

Intangible capitalisation increased significantly during H1 2018, driven by increasing head count in the Cambridge-based R&D team, and also the addition of the Italian R&D team to the group. Clearly the additional capitalisation is evidence of the increased investment in R&D.

We forecast FY 2018E gross cash at £6.5m, compared with H1 2018A at £5.9m. We expect the inflow to be driven by improvements in profitability and working capital.

The outlook remains positive…

The release contains a number of positive comments from management on the outlook. We highlight the following points:

- The four-year trend of EUS at least doubling every twelve months is expected to continue, driven by new routes, content and services being added to the BP
- EUS in the sales pipeline is equivalent to $4bn annually, with proposals progressing well. This provides for good near-term revenue visibility
- The Bango Platform has been successfully tested to over £5bn of annual transaction capacity. With £220m of EUS recorded for H1 2018A, the platform has plenty of capacity to support future growth
- H2 opex in the (profitable) payments business is expected to be stable vs the first half
- The data business is expected to turn EBITDA positive in the next twelve months. Management's view is based upon the unit's strong new business pipeline alongside revenue synergies from integrated management with the existing Bango business. (*Note, the payments business remains profitable*)
- Resale is extending the Bango ecosystem beyond Android, which has historically been Bango's dominant market and focus. Resale is device agnostic, and following

the recent new product launches, the group is gaining traction in the Apple (IOS) space. This potentially brings the Bango Platform to millions of new users

- Management re-iterated that the group's cash position (£5.88m H1 2018A) is sufficient to fund the group through to profitability, with sufficient headroom to grow sales and invest in both the Bango Platform and new product development

…with reasons to be confident in H2 performance

We believe Bango has made good progress during H1 2018A but acknowledge that FY 2018E results may appear challenging given the first half outcome. As previously discussed on page 4, we believe our FY2018E estimates are realistic and are supported by the considerable operational momentum reported during the first half. With EUS growth also expected to remain strong, we therefore believe there are grounds for optimism in the H2 outcome. We highlight:

- A number of new billing routes and customers were added to the Bango Platform during the first half – extending the reach of the Bango Platform to several hundred million new users and evidenced by the mid-year ENTEL Chile announcement, which is the first Google Play DCB launch in South America. Although the revenue and profit trajectories vary by client, new routes and clients make positive contributions almost immediately, given Bango's proven ability to add clients to the Bango Platform at near-zero incremental cost.
- An additional feature of the period was the progress made in resale and bundling, with key launches announced for Amazon Prime (UK, US and India) and Pandora music streaming (USA).

To recap, Resale is an extension of the Bango Platform ("BP") beyond traditional Direct Carrier Billing ("DCB"). It allows resellers (for example MNOs) to market third-party services to the reseller's own customer base. The platform can manage subscription models, and also one-time licencing transactions, with full synchronisation of license entitlements.

Bango announced additional Amazon Prime and the initial Pandora launch in July 2018, having initially launched resale for Amazon Prime with Bharti Airtel in India in January 2018. The group therefore now has reference clients across the globe, and these are relationships with tier-1 internet players.

In our view, Bango's success in signing up new customers to its resale and bundling offering highlights the group's ability in new product development and demonstrates the versatility of the Bango Platform.

(For further analysis of the bunding and resale opportunity, see Bango: Doubling Down on Platform Leadership Strategy. Progressive Equity Research 07/02/18)

Financial Summary: Bango

Year end: December (£m unless shown)

PROFIT & LOSS	**2015**	**2016**	**2017**	**2018E**	**2019E**
EUS (Non-GAAP)	44.7	132.3	271.4	540.0	1,404.0
Revenue	1.3	2.6	4.2	7.1	11.3
Adj EBITDA	(3.1)	(2.4)	(1.6)	1.0	4.3
Reported PBT	(5.0)	(4.7)	(3.9)	(1.3)	1.7
Fully adj PBT	(5.0)	(4.1)	(3.6)	(1.0)	2.0
NOPAT	(2.6)	(2.9)	(2.0)	0.5	3.6
Reported EPS	(9.0)	(6.8)	(5.2)	(1.5)	2.8
Fully adj EPS	(9.5)	(6.3)	(5.5)	(1.5)	2.8
Dividend per share	0.0	0.0	0.0	0.0	0.0
CASH FLOW & BALANCE SHEET	**2015**	**2016**	**2017**	**2018E**	**2019E**
Operating cash flow	(3.5)	(2.6)	(0.7)	(1.0)	5.3
Free Cash flow	(4.1)	(6.0)	(2.2)	(1.9)	4.4
FCF per share	(7.8)	(9.2)	(3.4)	(2.7)	6.3
Acquisitions	0.0	0.0	0.0	(1.3)	0.0
Disposals	0.0	0.0	0.0	0.0	0.0
Shares issued	10.5	0.1	1.2	4.8	0.0
Currency effects	(0.1)	(0.1)	0.0	0.0	0.0
Net cash flow	5.9	(6.2)	(0.8)	1.6	4.4
Cash & equivalents	12.2	5.7	4.8	6.5	10.9
Net (Debt)/Cash	11.8	5.6	4.6	6.2	10.6
NAV AND RETURNS	**2015**	**2016**	**2017**	**2018E**	**2019E**
Net asset value	15.9	12.4	10.7	10.7	13.7
NAV/share	29.9	19.1	16.2	15.4	19.6
Net Tangible Asset Value	12.5	6.3	4.6	2.7	5.5
NTAV/share	19.3	9.7	7.1	3.9	7.8
Average equity	12.9	14.1	11.5	10.7	12.2
Post-tax ROE (%)	(37.4%)	(31.2%)	(29.8%)	(9.6%)	16.0%
METRICS	**2015**	**2016**	**2017**	**2018E**	**2019E**
EUS growth	77.5%	196.1%	105.1%	99.0%	160.0%
Revenue growth	(74.5%)	101.8%	58.2%	70.4%	59.1%
Adj EBITDA growth	(14.5%)	(22.9%)	(35.3%)	(160.8%)	346.7%
Adj PBT growth	(7.2%)	(18.6%)	(12.0%)	(71.3%)	(289.2%)
Adj EPS growth	10.8%	(33.0%)	(13.8%)	(72.9%)	(289.2%)
Dividend growth	N/A	N/A	N/A	N/A	N/A
Margin on EUS	2.9%	2.0%	1.5%	1.3%	0.8%
VALUATION	**2015**	**2016**	**2017**	**2018E**	**2019E**
EV/Sales	84.4	41.8	26.4	15.5	9.7
EV/EBITDA	(34.9)	(45.3)	(70.0)	115.2	25.8
EV/NOPAT	(42.0)	(37.5)	(54.4)	242.4	30.9
PER	N/A	N/A	N/A	N/A	58.1
Dividend yield	N/A	N/A	N/A	N/A	N/A
FCF yield	(4.8%)	(5.7%)	(2.1%)	(1.6%)	3.9%

Source: Company information and Progressive Equity Research estimates

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