

Interactive Media - Korea

Mobile Game Tracker: Oct-Dec bookings down 4% YoY

Industry Overview

Oct-Dec 2023 mobile game tracker

We track monthly/quarterly revenue of 200+ mobile games across the six game stocks in our coverage (NC, Krafton, Netmarble, KG, PA, and Com2uS) on Sensor Tower (ST). We believe the data series below could provide intra-quarter reads on YoY or MoM trends of the companies' revenue. Nevertheless, we caution there could be discrepancies with the actual numbers, given 1) the data track mobile only, not PC/ console; 2) the data capture self-published titles only, and thus exclude royalty revenue; 3) historically, we note ST has not captured 100% of official mobile revenue, but only c.50-70%, based on our analysis; and 4) ST reports USD-based bookings, while Korea firms print quarterly results in KRW.

4Q23 mobile bookings down 4% YoY

Monthly average mobile game bookings were down 4% YoY in 4Q23, witnessing a moderate recovery vs. 3Q23 (-14% YoY). The Oct-Dec figure was flat vs. 3Q23. The visibility on Korea mobile game market remains low, in our view. We are more cautious on game developers with relatively weak pipelines. We prefer high-quality developers/publishers with resilient revenue upside for the western PC/console market.

4Q23 mobile bookings flat vs. 3Q23

NC: Mobile bookings grew 15% in 4Q vs. 3Q. The figure was down 14% YoY vs. down 40% YoY in 3Q. **LM** rose 29% YoY due to a class reboot (new character) on 29 Nov. **LW/ L2M** down 41%/ 15% YoY. **Krafton:** Down 10% vs. 3Q. Self-published *PUBG Mobile* down 10% vs. 3Q. It was up 157% YoY due to a user event in Nov-Dec, continuing its solid trend after *BGMI* resumption in May. *Peacekeeper Elite* and Tencent-published *PUBG Mobile* down 5% YoY/ up 4% vs. 3Q; the Dec figure up 22% MoM. **Netmarble:** Up 8% vs. 3Q. **MCOC/ Lotsa Slots** up 8%/ 1% vs. 3Q. *Jackpot World/Cash Frenzy* down 4%/ 7% QoQ. **KG:** Flat vs. 3Q. *Odin* flat QoQ (large-scale update on 20 Dec), while *ArcheAge War* down 24% QoQ. *Uma Musume* bookings rose 32% QoQ due to 1.5th anniversary updates/ events from 13 Dec. **PA:** *BDM* down 24% vs. 3Q. **Com2uS:** Down 13% vs. 3Q. *Sky Arena/ MLB 9 Innings 23* up 1%/ 16% QoQ, but *MLB 9 Innings Rivals* saw 42% QoQ decrease.

Expect platform and genre diversification in 2024

Several major Korea game developers are planning to expand to the console platform in 2024, continuing their efforts from 2023 (incl. *Lies of P* by Neowiz and *Dave the Diver* by Nexon). Gacha regulation (implemented on 22 Mar) should lead the companies to pursue diversified business strategies. Separately, in late-Dec, the Chinese government announced draft measures that are likely to impact user engagement and game grossing. Major titles that are to be available on the console include: **NC** – *TL* in line with its global launch (2024); **Krafton** – *inZOI*, a life simulation title unveiled at G-Star 2023 (2024); **Netmarble** – official launch of *Paragon: The Overprime* (TPS/ MOBA; 1H24); **Com2uS** – publishing *The Starlight*, an MMORPG developed with Unreal Engine 5 (1H25); **PA** – the launch schedule of *Crimson Desert* is not yet confirmed.

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Refer to important disclosures on page 12 to 14.

12646392

Timestamp: 16 January 2024 03:30PM EST

17 January 2024

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Glossary

NC: NCSOFT
KG: Kakao Games
PA: Pearl Abyss
LW: Lineage W
LM: Lineage M
L2M: Lineage 2M
SKIDLE: Seven Knights Idle Adventure
BGMI: Battlegrounds Mobile India
BDM: Black Desert Mobile
MCOC: Marvel Contest of Champions
IP: Intellectual property
MMORPG: massively multiplayer online role-playing game
RPG: role-playing game
TPS: third-person shooter
MOBA: multiplayer online battle arena

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[Mobile Game Tracker: Korea +6%, North America +40%, Japan -32% in Dec \(17 Jan 2024\)](#)

[Korea Internet: Year Ahead 2024 \(16 Jan 2024\)](#)

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Oct-Dec 2023 mobile game tracker

Bookings stable since Oct-2022, tough comps till year-end

We track monthly/quarterly revenues of 200+ mobile games across the six game stocks in our coverage – NCSOFT (NC), Krafton, Netmarble, Kakao Games (KG), Pearl Abyss (PA), and Com2uS – on ST. Oct-Dec aggregated mobile bookings of the six companies were -4% YoY, recovering from -15% YoY in 3Q23. The monthly average number was flat vs. 3Q23. The visibility on Korea mobile game market remains low, in our view. We expect the Korea gaming market to also see some growth from the PC/ console market, driven by a series of blockbuster title launches in mid-2024.

Exhibit 1: Mobile gaming 3P bookings vs. Actual figures

Aggregated mobile bookings of the six companies decreased 4% YoY in 4Q23, per Sensor Tower data

Company	Mobile mix of revenue	Sensor Tower YoY growth ***																Company reported YoY Growth ****	
		3Q23A	Jan '23	Feb '23	Mar '23	1Q23	Apr '23	May '23	Jun '23	2Q23	Jul '23	Aug '23	Sep '23	3Q23	Oct '23	Nov '23	Dec '23		4Q23
		3Q23A																	
NCSOFT	65%	-49%	-54%	-51%	-51%	-38%	-49%	-33%	-40%	-30%	-47%	-42%	-40%	-19%	-10%	-12%	-14%	-37%	
Krafton*	69%	-38%	-52%	-60%	-51%	-47%	-52%	+56%	-21%	+64%	+125%	+172%	+117%	+154%	+73%	+171%	+135%	+9%	
- PUBG Mobile (Tencent)	NA	-12%	-27%	-20%	-19%	-17%	-31%	-22%	-23%	-2%	-22%	-10%	-12%	-13%	+4%	-5%	-5%	NA	
Netmarble	92%	-12%	-6%	+2%	-6%	-5%	-12%	-15%	-11%	-20%	-15%	+9%	-10%	-1%	-8%	-10%	-6%	-8%	
Kakao Games	69%	+9%	-18%	+26%	+4%	+9%	-30%	+6%	-5%	-14%	-1%	-8%	-8%	-31%	+23%	+25%	+1%	-7%	
Pearl Abyss**	NA	-13%	-19%	-24%	-18%	-29%	-36%	-21%	-29%	-19%	-22%	-19%	-20%	-37%	-49%	-45%	-44%	NA	
Com2uS	77%	-22%	-8%	+75%	+14%	+39%	+5%	+4%	+17%	+56%	+28%	-2%	+26%	+14%	+16%	+2%	+10%	+13%	
Total	71%	-28%	-32%	-20%	-27%	-15%	-28%	-15%	-19%	-15%	-18%	-10%	-14%	-8%	-3%	-1%	-4%	-11%	

Source: BofA Global Research estimates, Sensor Tower

* Excludes royalty revenue; ** Revenue by platform not provided by company; *** Based on Sensor Tower data provided in US\$; **** Based on financial reports provided by each company in Korean Won

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Exhibit 2: Mobile gaming 3P bookings comparison

In 4Q23, monthly average mobile bookings were flat vs. 3Q23

Company	Quarterly			Annual		
	Oct-Dec '23 avg. bookings (US\$m)	YoY growth	QoQ growth	2023 avg. bookings (US\$m)	2022 avg. bookings (US\$m)	YoY growth
NCSOFT	53	-14%	+15%	53	87	-39%
Krafton*	11	+135%	-10%	9	7	+22%
- PUBG Mobile (Tencent)	98	-5%	+4%	99	116	-15%
Netmarble	81	-6%	+1%	79	86	-8%
Kakao Games	26	+1%	-14%	29	30	-2%
Pearl Abyss*	1	-44%	-24%	2	3	-27%
Com2uS	17	+10%	-13%	19	16	+17%
Total	190	-4%	-0%	190	228	-17%

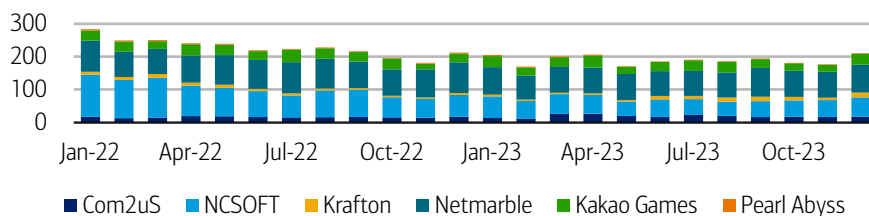
Source: Sensor Tower

* Excludes royalty revenue

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Exhibit 3: Korea mobile gaming - Monthly mobile bookings (US\$m)

Aggregate mobile bookings were US\$211mn in Dec (-1% YoY, 19% MoM)



Source: Sensor Tower

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We believe this data series could provide intra-quarter reads on YoY or MoM trends of the companies' revenue. Nevertheless, we caution there could be discrepancies with actual revenue, given 1) the data track mobile only, not PC/ console; 2) the data capture self-published titles only, and thus exclude royalty revenue; and 3) historically, we note ST has not captured 100% of official mobile revenue, but only c.60-80%, based on our analysis.

ST conducts quarterly download/revenue data revisions designed to implement the most up-to-date models, tune parameters for key markets, and audit for accuracy degradation. These revisions impact historical data series (and YoY comps) and could result in differences vs. data history published in our previous reports. While the magnitude of impact varies across individual apps and geographies, on an aggregate level, these changes account for less than 0.5% of the App Store's total revenue.

Exhibit 5: Korea gaming - Events

The First Castle Siege in Throne & Liberty (NCSOFT) will be held from 2 Feb

Month	Company	Start	End	Title	Event
Dec-23	Com2uS	7-Dec	7-Dec	Summoners War: Chronicles	New character and contents updates
		18-Dec	18-Dec	Dark Sword	Steam launch
	NCSOFT	8-Dec	8-Dec	Throne & Liberty	Korea launch
		22-Dec	22-Dec	Blade & Soul 2	China license approval
	Krafton	1-Dec	1-Dec	Defense Derby	New unit (character) update
		7-Dec	7-Dec	PUBG	New map Rondo update
		22-Dec	22-Dec	New State Mobile	New climate effect update
		29-Dec	29-Dec	Defense Derby	New unit (character) update
	Netmarble	8-Dec	8-Dec	Ni no Kuni: Cross Worlds	New theme and character update
	Kakao Games	5-Dec	19-Jan	Uma Musume	1.5th Anniversary events/promotions
		11-Dec	11-Dec	Ares: Rise of Guardians	2nd world server transfer
		20-Dec	20-Dec	Odin: Valhalla Rising	New class (character) update
	PearlAbyss	16-Dec	17-Dec	Black Desert / Black Desert Mobile	Offline Calpheon Ball (gamer event)
		20-Dec	20-Dec	Black Desert	New character (class) update
Jan-24	Com2uS	2-Jan	1-Dec	Summoners War: Sky Arena	Year-long events for 10th anniversary
		4-Jan	4-Jan	Starseed: Asnia Trigger	Teaser website open (trailer, news, etc.)
		5-Jan	26-Jan	Summoners War: Chronicles	User events incl. quests/ missions/ rewards
		9-Jan	9-Jan	Summoners War: Sky Arena	Global launch through Steam
		10-Jan	10-Jan	Frostpunk: Beyond the Ice	Early access open in the US, UK and Philippines
		15-Jan	15-Jan	Summoners War: Sky Arena	Monster management system update
	NCSOFT	8-Jan	8-Jan	Throne & Liberty	Requires all users to sign up for device registration security service
		10-Jan	10-Jan	Throne & Liberty	Events improvement and weapon balance adjustment
		17-Jan	17-Jan	Throne & Liberty	Addition of skill transition system and skill quick-slot sets
			19-Jan	Lineage W	Collaboration with Saga Prefecture (Saga exploration area and events)
		24-Jan	24-Jan	Throne & Liberty	New skill update and registration event
	Krafton	11-Jan	11-Jan	PUBG	Rondo map update
	Netmarble	1-Jan	30-Jun	Fate/Grand Order	Monthly update/event in 1H24
		11-Jan	11-Jan	A3: Still Alive	New content added (random map and gimmicks)
				Seven Knights Idle Adventure	2nd update from collaboration with Omniscient Reader's Viewpoint (webtoon)
	Kakao Games	1-Jan	TBD (monthly)	Eversoul	New content added (incl. events and new characters)
		3-Jan	3-Jan	Ares: Rise of Guardians	New skills (weapon active skills) update
			17-Jan	ArcheAge War	Class exchange system and balance update
				Ares: Rise of Guardians	User event including reward giveaways
		4-Jan	4-Jan	R.O.M	Kakao Games/ Redlab Games joint media showcase
			TBD	Eversoul	User rewards and events celebrating 1-yr anniversary (5 Jan)
		10-Jan	10-Jan	ArcheAge War	Character transfer (character gifting) between users enabled
	PearlAbyss			Ares: Rise of Guardians	New challenge content and event update
		5-Jan	14-Jan	Black Desert	Offline pop-up store run to celebrate 10th anniversary
		9-Jan	9-Jan	Black Desert / Crimson Desert	In-game content (BD) and trailer (CD) demonstration at CES 2024
		11-Jan	24-Jan	Black Desert	Second China closed-beta test, reportedly
Feb-24	NCSOFT	2-Feb	4-Feb	Throne & Liberty	Castle siege begins
		15-Feb	15-Feb	Trickster M / Probaseball H3	Ends services of Trickster M and Probaseball H3
	Kakao Games	17-Feb	18-Feb	Eversoul	Participating at Illustar Fes (offline cartoon/ animation festival)
Jun-24	PearlAbyss	22-Jun	22-Jun	Black Desert	Offline user event (Heidel Ball 2024)

Source: Company data, Press report



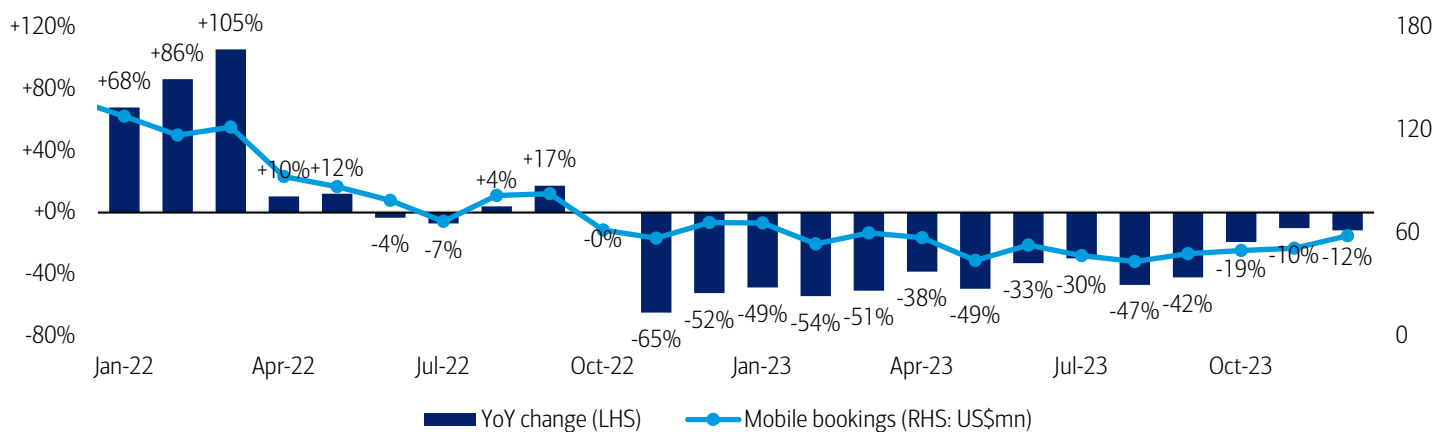
NC: 4Q23 bookings up 15% vs. 3Q23

Per our tracking of 15+ mobile games published by NC:

- 3P estimates of monthly average mobile bookings (US\$53mn) were down 14% YoY in 4Q23 vs. down 40% YoY in 3Q23.
- The 4Q23 monthly average figure (US\$53mn) was up 15% vs. 3Q23 monthly average (US\$46mn).
- In Oct-Dec, all three mobile *Lineage* titles saw mobile bookings rise QoQ. *Lineage M*/ *Lineage W*/ *Lineage 2M* saw 14%/ 12%/ 25% QoQ increase.

Exhibit 5: NCSOFT - Mobile bookings trend

NCSOFT mobile bookings fell 12% YoY but rose 14% MoM in Dec

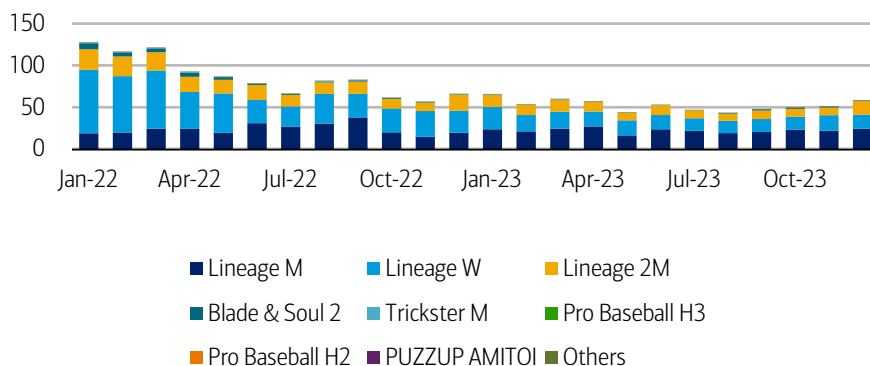


Source: Sensor Tower

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Exhibit 6: NCSOFT - Monthly mobile bookings (US\$mn)

The monthly average was US\$53mn in Oct-Dec '23 (+15% vs. 3Q23)



Source: Sensor Tower

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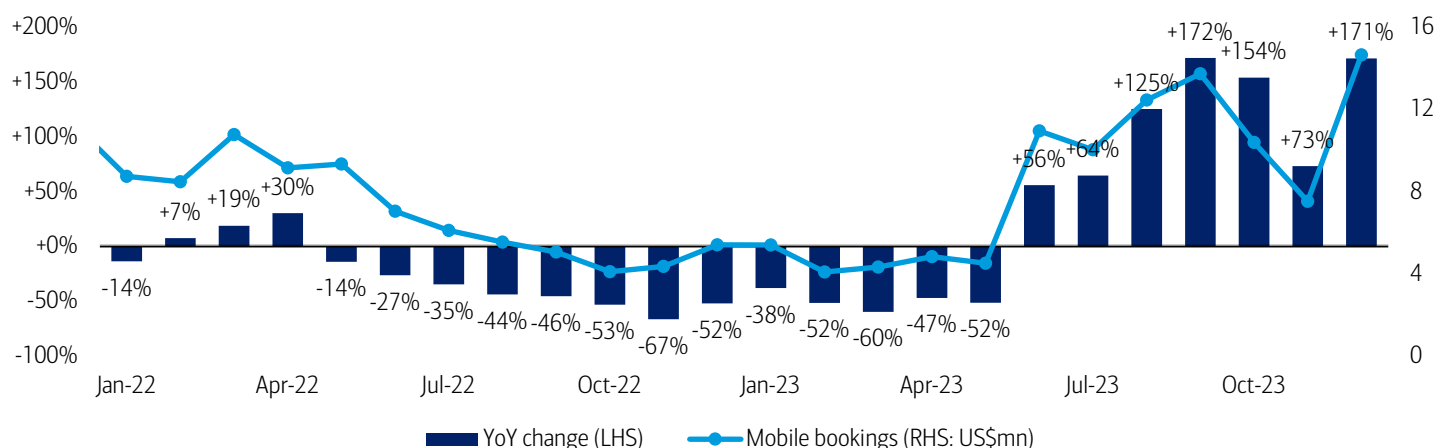
Krafton: Bookings up on BGMI resumption

Per our tracking of 7+ mobile games published by Krafton:

- 3P estimates of monthly average mobile bookings (US\$11mn) were up 135% YoY in 4Q23 vs. up 117% YoY in 3Q23.
- The 4Q23 monthly average data (US\$11mn) were down 10% vs. 3Q23 (US\$12mn).
- In Oct-Dec, self-published *PUBG Mobile/BGMI* (US\$10mn in Korea, Japan, and India) down 10% vs. 3Q23. It is up 104% MoM in Dec due to a user event in Nov-Dec, continuing a solid trend after *BGMI* resumption on 29 May. *Defense Derby* – released on 3 Aug – monthly average bookings came in at US\$0.3mn in Oct-Dec (vs. US\$0.4mn in 3Q23).
- *Peacekeeper Elite* and Tencent-published *PUBG Mobile* monthly average bookings (US\$98mn) are down 5% YoY but up 4% vs. 3Q23.

Exhibit 7: Krafton - Mobile bookings trend

Krafton mobile bookings rose 171% YoY and 95% MoM in Dec

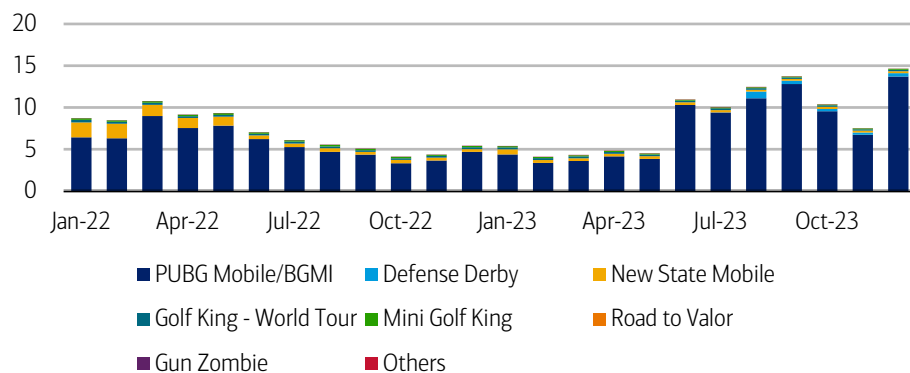


Source: Sensor Tower

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Exhibit 8: Krafton - Monthly mobile bookings (US\$mn)

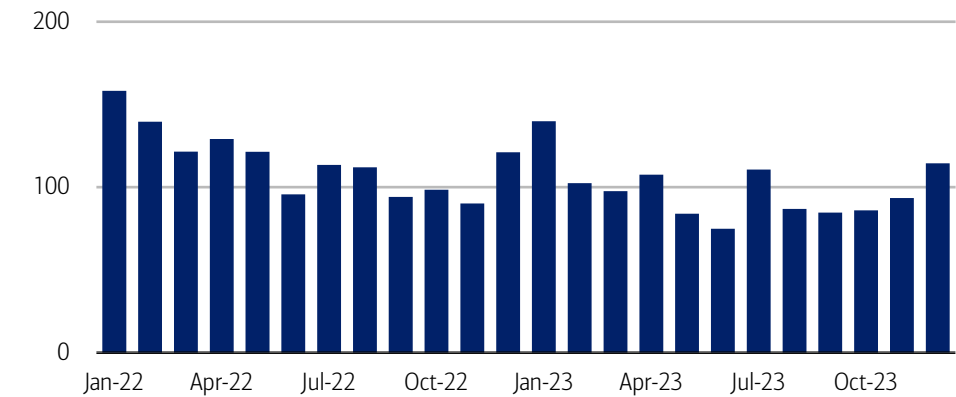
The monthly average was US\$11mn in Oct-Dec '23 (-10% vs. 3Q23)



Source: Sensor Tower

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Exhibit 9: PUBG Mobile* (Tencent) - Monthly mobile bookings (US\$mn)
It was US\$114mn (-5% YoY, +22% MoM) in Dec



Source: Sensor Tower; Note: * including Peacekeeper Elite

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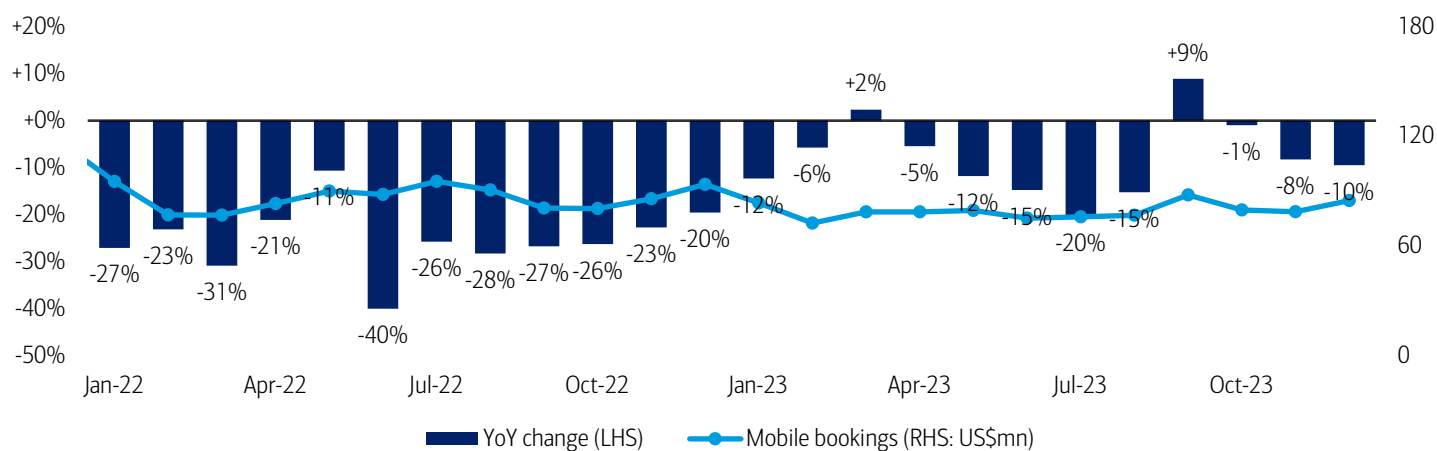
Netmarble: 4Q23 bookings up 1% vs. 3Q23

Per our tracking of 39+ mobile games published by Netmarble:

- 3P estimates of monthly average mobile bookings (US\$81mn) were down 6% YoY in 4Q23 vs. down 10% YoY in 3Q23.
- 4Q23 monthly average data of US\$81mn were up 1% vs. US\$80mn in 3Q23.
- In Dec, *Seven Knights Idle Adventure*, released on 6 Sep, monthly bookings (US\$7mn) were down 21% vs. Nov 2023. The monthly average figures of *MCOC* (US\$12mn) and *Lotsa Slots* (US\$9mn) rose 8% and 1%, respectively, vs. 3Q23. *Jackpot World* (US\$10mn) was down 4% QoQ.

Exhibit 10: Netmarble - Mobile bookings trend

Netmarble mobile bookings fell 10% YoY but rose 8% MoM in Dec

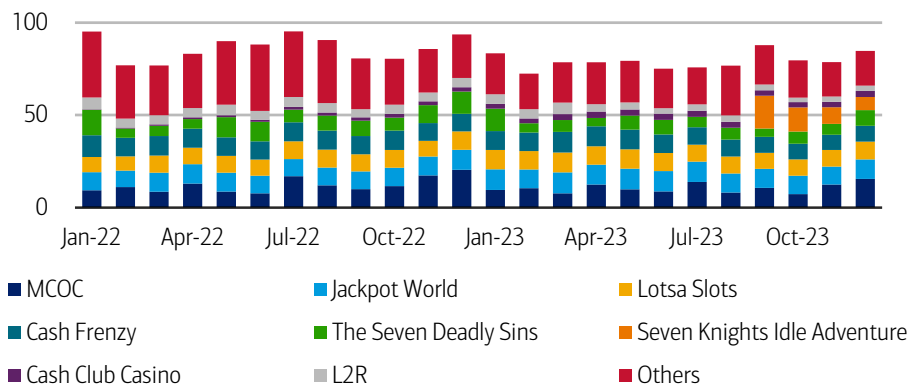


Source: Sensor Tower

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Exhibit 11: Netmarble - Monthly mobile bookings (US\$mn)

The monthly average was US\$81mn in Oct-Dec '23 (+1% vs. 3Q23)



Source: Sensor Tower

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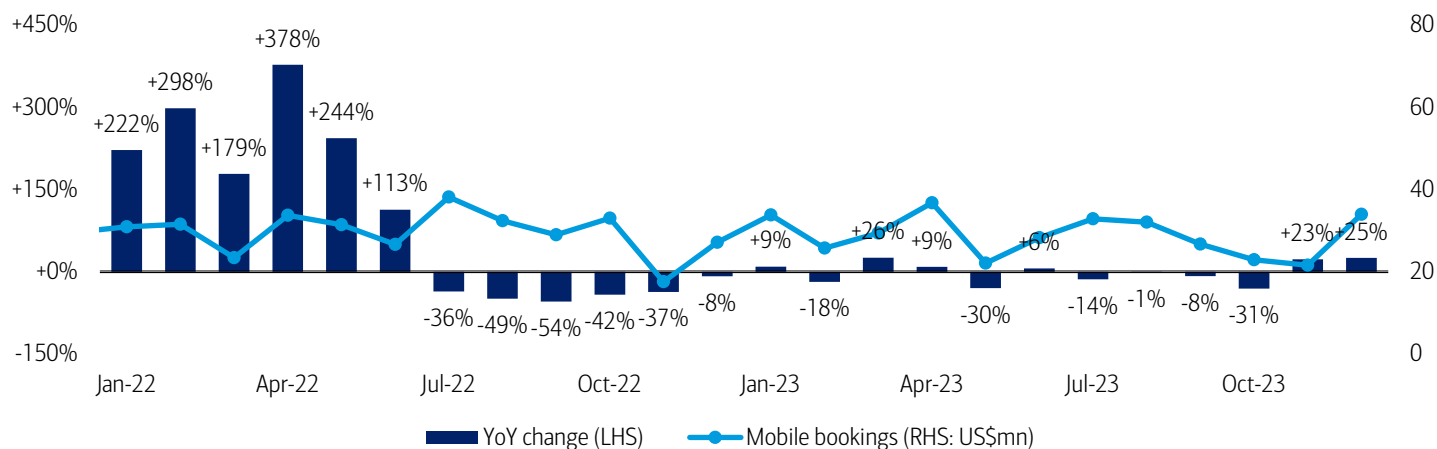
Kakao Games: 4Q23 bookings down 14% vs. 3Q23

Per our tracking of 16+ mobile games published by Kakao Games:

- 3P estimates of monthly average mobile bookings (US\$26mn) were up 1% YoY in 4Q23 vs. down 8% YoY in 3Q23.
- 4Q23 monthly average figure (US\$26mn) was down 14% vs. US\$31mn in 3Q23.
- In 4Q23, *Odin: Valhalla Rising* (US\$15mn) remained flat vs. 3Q23 (large-scale update on 20 Dec). *Uma Musume* rose 32% QoQ due to 1.5th anniversary updates/ events from 13 Dec, but *ArcheAge War*/ *Ares*/ *Eversoul* declined 24%/ 44%/ 36% QoQ.

Exhibit 12: Kakao Games - Mobile bookings trend

Kakao Games mobile bookings rose 25% YoY and 57% MoM in Dec

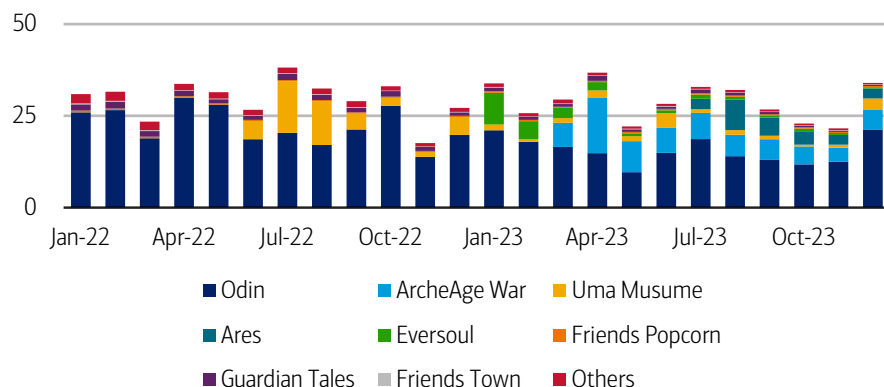


Source: Sensor Tower

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Exhibit 13: Kakao Games - Monthly mobile bookings (US\$mn)

The monthly average was US\$26mn in Oct-Dec '23 (-14% vs. 3Q23)



Source: Sensor Tower

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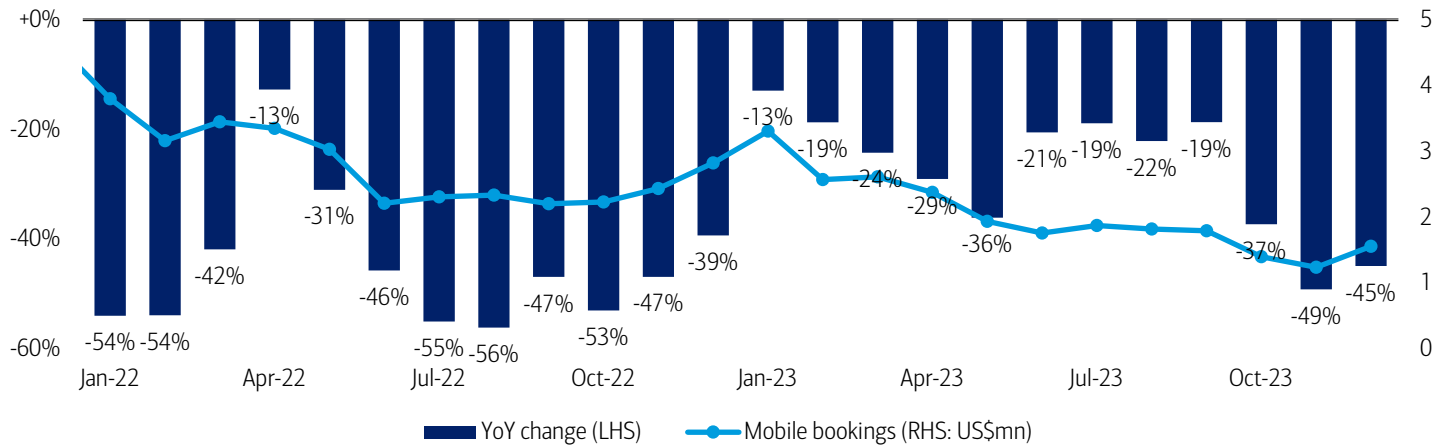
Pearl Abyss: BDM sequentially weak

Per our tracking of *Black Desert Mobile*, a mobile game published by Pearl Abyss:

- 3P estimates of monthly average mobile bookings (US\$1.4mn) were down 44% YoY in 4Q23 vs. down 20% YoY in 3Q23.
- 4Q23 monthly average figure (US\$1.4mn) was down 24% vs. US\$1.8mn in 3Q23.

Exhibit 14: Pearl Abyss - Mobile bookings trend

Pearl Abyss mobile bookings fell 45% YoY but rose 26% MoM in Dec

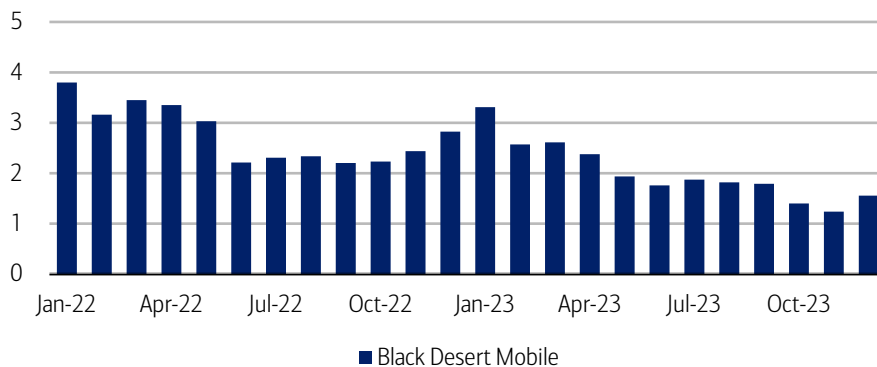


Source: Sensor Tower

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Exhibit 15: Pearl Abyss - Monthly mobile bookings (US\$m)

The monthly average was US\$1mn in Oct-Dec '23 (-24% vs. 3Q23)



Source: Sensor Tower

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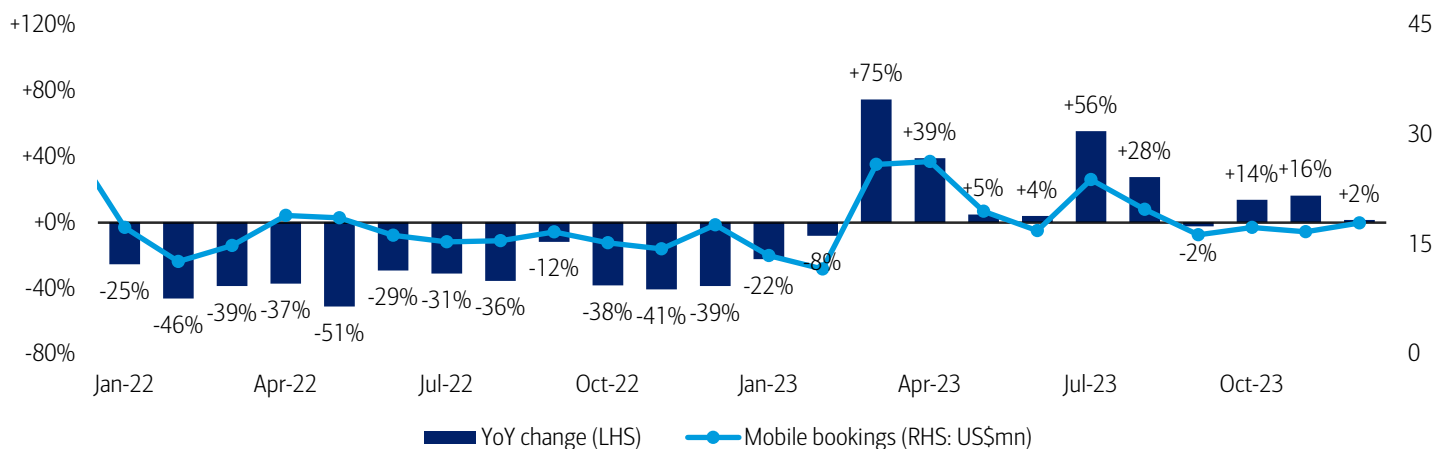
Com2uS: 4Q23 bookings down 13% vs. 3Q23

Per our tracking of 21+ mobile games developed by Com2uS:

- 3P estimates of monthly average mobile bookings (US\$17mn) were up 10% YoY in 4Q23 vs. up 26% YoY in 3Q23.
- 4Q23 monthly average figure (US\$17mn) was down 13% vs. US\$20mn in 3Q23.
- The mobile bookings of *Sky Arena* (US\$9mn) and *MLB 9 Innings 23* (US\$3mn) were up 1% and 16%, respectively, vs. 3Q23. *MLB 9 Innings Rivals* (US\$2mn) saw 42% QoQ decrease.

Exhibit 16: Com2uS - Mobile bookings trend

Com2uS mobile bookings rose 2% YoY and 7% MoM in Dec

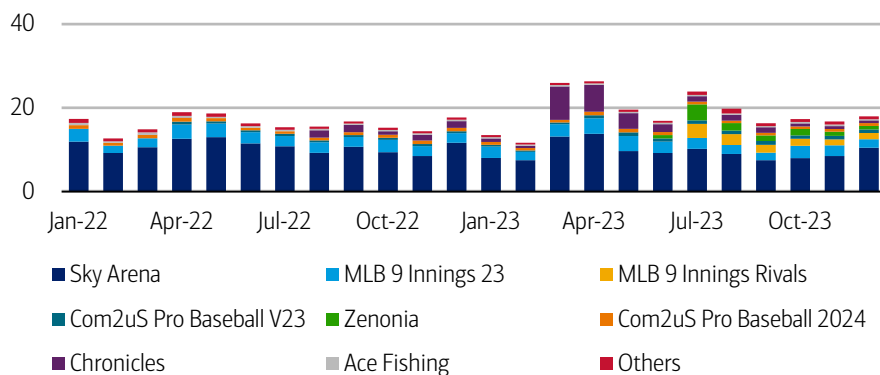


Source: Sensor Tower

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Exhibit 17: Com2uS - Monthly mobile bookings (US\$mn)

The monthly average was US\$17mn in Oct-Dec '23 (-13% vs. 3Q23)



Source: Sensor Tower

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Disclosures

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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