



## Game on

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Video gaming has evolved significantly over the last few decades, shifting from the simple arcade-style gameplay of the 80s to today's games that sport hyper-realistic graphics, captivating narratives and deeply embedded social features.

With over 2.5 billion gamers worldwide, gaming has emerged as a mainstream form of rich entertainment that allows friends to connect and share dynamic gaming experiences.

# Game on

The economic fundamentals of the video game market are attractive, with growth expected to accelerate beyond 2023. We look into the current gaming industry, investigating recent developments and discussing how Asian game developers have grown their share of western gaming markets.

## Global gaming

In 2022, the total gaming market was estimated at over \$180 billion (*below left*), having grown at 12% per annum over the last decade (mobile gaming at 27% per annum and PC and console gaming at around 3% per annum). Geographically, Asia Pacific is the largest global gaming market with approximately 47% share. North America and Europe follow, with 27% and 18% market shares respectively. The US and China each account for around 25% of the market and Hong Kong-listed Tencent is the largest gaming company, with an estimated 17% share of the global gaming market (*below right*).

Historically, Asian game titles have been heavily influenced by Asian cultural characteristics, leading to content that is not easily transferable to western markets where there are clear preferences for higher quality, realistic graphics and more immersive western story content. Recognising the global gaming opportunity, Chinese developers like Tencent and NetEase have successfully built the necessary development

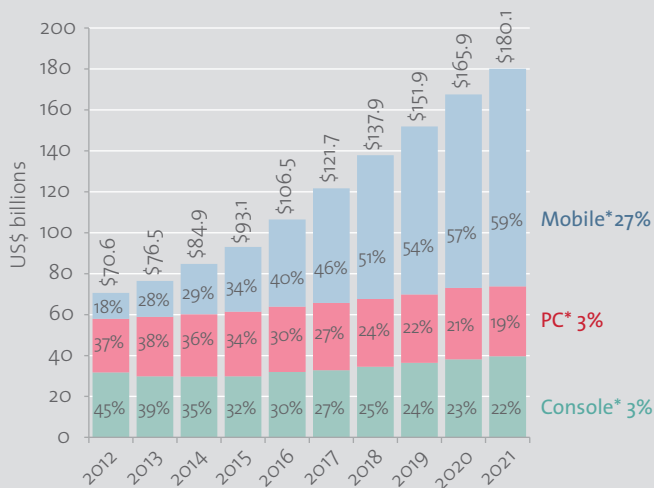
and distribution related intellectual property to compete directly with western studios. The Chinese companies have been pioneers in mobile game development with global leadership in the development of high-quality AAA<sup>1</sup> mobile titles that appeal to audiences worldwide. Subsequently, western studios are increasingly looking to Chinese game studios to develop mobile versions of popular western franchises. Chinese developers have made significant inroads into markets outside China and are likely to build on this success, with an expected 18% market share of the global gaming market by 2025 (*charted on next page*).

## A shifting landscape

Third party digital distribution enabled the success and growth of mobile gaming, which has fundamentally changed the industry. The proliferation of smaller studios targeting the mobile market has seen the market share of the top 10 largest gaming firms decline from around 90% in 2016 to below 60% today. In a fragmented market, we see a shift to the premiumisation of game content. Here, developers look to differentiate their content by shifting the focus towards developing high-quality AAA game franchises with realistic graphics and strong narratives.

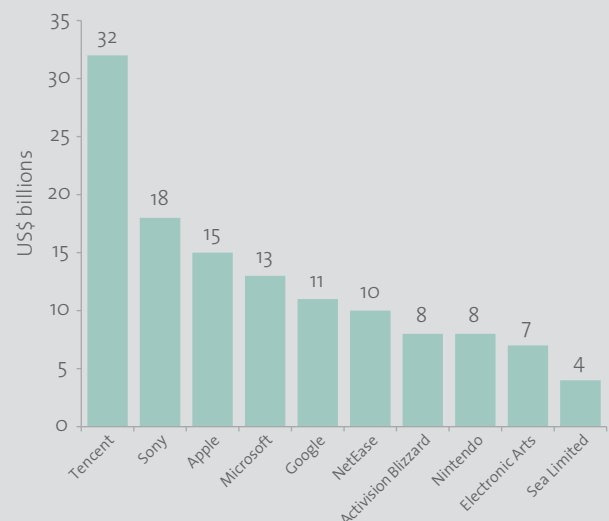
<sup>1</sup> Games published by larger studios with a higher development and marketing budget, where the development cycle is longer, due to complexity, and the title is often considered a leader in its genre.

### Global games market



\*growth per annum since 2012  
Source: ©Newzoo, Global games market report

### Global games revenue (2021)



Source: ©Newzoo, Macquarie research (August 2022)

While the proliferation of smartphones has propelled growth over the last decade, innovations in game distribution, monetisation and technology are key to appreciating the continued excellent growth opportunities for the industry.

### Digital distribution a gamechanger

Game distribution was previously dominated by the sale of hard discs at retail outlets. This was expensive and had limitations in terms of the sheer size of games and providing game updates (a critical element in maintaining long-term player engagement).

The shift to digital game distribution, where games are aggregated across developers and sold online, has grown rapidly and now accounts for over 85% of total game distribution. These gaming platforms offer compelling value to consumers by providing access to a wide variety of games and substantially reducing friction costs<sup>2</sup> through making games more affordable and easier to access.

Developers have also benefited from digital distribution. With no size limitation, they can deliver more immersive, high-quality titles, effectively target consumers and effortlessly sell new content. This helps to grow their addressable market, however, the cost to developers is steep, with average distribution fees as high as 30% of gaming revenue. It is even worse for smaller

game studios that require publishing support, for which platforms often take another 15-20% of net revenue. Apple and Google are the largest mobile distribution platforms, while Steam, Microsoft and Sony are the largest PC and console distribution platforms.

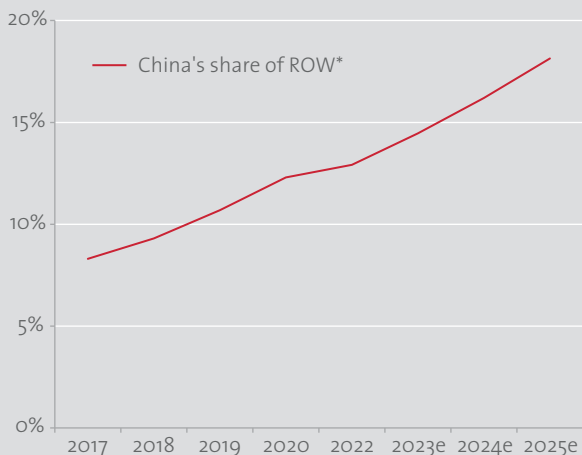
This lucrative digital distribution model has resulted in growing competition, with cheaper independent or developer-owned digital distribution platforms emerging. The trend is likely to continue and presents a very large profit opportunity for game developers, as lower distribution fees result in a large net revenue uplift, with little incremental cost.

### Innovative monetisation

The pricing strategy for games was originally simple, with sales at a high fixed price, often resulting in gamers choosing to skip unfamiliar titles. The fixed price model did not adequately differentiate between different types of gamers. For example, casual gamers tended to play the main content only, enjoying the story before moving on, versus more hardcore gamers who invested significantly more time to unlock additional game modes and difficulty levels. This lack of sophistication in pricing invariably led to fewer gamers and a smaller addressable market.

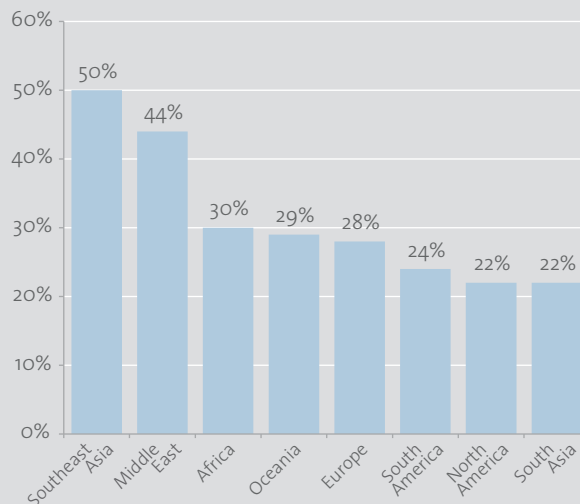
<sup>2</sup> These include cost and time to travel to a physical store, difficulty in accessing game expansions and add-on content, and lack of easy access to information on the game (including walkthroughs and reviews for example).

### Expanding share in overseas market (2022)



\*Rest of the world (global games market excl China)  
Source: CNG, Macquarie research (August 2022)

### Market share for Chinese game companies\* (2021)



\*within top 250 games in different markets  
Source: GPC, iResearch, Macquarie research (August 2022)

# Game on

Lately, monetisation methods have changed to better differentiate between gamers' preferences and address weaknesses in the fixed price model. The most widely adopted monetisation method is where gamers pay for in-game cosmetic or other items that improve their progress. Pure cosmetic items affect how the game character looks, serving as a means of self-expression and as social capital for gamers. Typical examples include skins (decoration of the character or weapon) and emotes (motions/dances to convey body language).

Games employing these models are usually free to play and attract a larger pool of players. Money is typically made from more hardcore gamers who are willing to pay to improve their gaming experience. While these new monetisation models have proven successful in growing sales, it is estimated that less than 10% of total gamers pay for items. This represents a particularly large opportunity for game developers who are increasingly using in-game systems such as targeted advertising to encourage spending during play.

Monetisation methods also continue to evolve with a visible shift to "gaming as a service" models, whereby gamers pay a monthly fee for access to a catalogue of games and new releases (similar to streaming video services like Netflix). To date, this model has resulted in improving paying ratios, with

the added benefit of limiting in-game monetisation, therefore substantially reducing fees paid to third party distributors.

## Technology as an enabler

The rollout of low latency 5G mobile networks is a boon for the gaming industry as this enables on-demand gaming services, streamed live from a datacentre to players' devices. It avoids the need for expensive hardware and allows developers to bypass the hardware limitations of today's smartphones that struggle to run high-quality AAA titles.

Another recent area of advancement has been around the software tools that game developers use to code video games. These tools include technologically advanced software that provide an easy way to: create realistic visuals, implement real world physics and destruction systems and add connectivity and cross-platform play to games. Gaming development often sits at the forefront of innovation and these tools are extensively used in non-gaming pursuits such as filmmaking, architecture and automotive design.

The two most popular gaming engines, Unity and Unreal, command over 65% of the market and the recent release of Unreal Engine 5 is a massive technological step forward in delivering hyper-realistic gaming experiences. Armed with a new generation of development tools, we expect a further shift to premiumisation. This will help larger studios to better differentiate, grow market share in a competitive market and increase revenue per title. Scan the *QR code* using your mobile device to view a recent Alpha Romeo advert created in Unreal Engine 5.

## Unreal Engine 5 in action



## Poised for progress

We expect that the growth of the gaming market should accelerate beyond 2023, supported by innovations in distribution and monetisation models. The shift to premiumisation, aided by new technology, is another sizable growth opportunity that could see larger studios gaining market share in a relatively fragmented gaming market. Chinese developers are global leaders in the development of mobile games and are well positioned to continue increasing their share of the burgeoning global gaming market. **UP**



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