FROST & SULLIVAN

Market Engineering

Market Study of Global Toy Industry

Presented to

布鲁可
中国积木 原创品牌

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Confidential

Overall Assumptions and Methodology

Methodology:

In preparing the report, Frost & Sullivan has relied on the statistics and information obtained through primary and secondary research.

- Primary research includes interviewing industry insiders, competitors, downstream customers and recognized third-party industry associations.
- Secondary research includes reviewing corporate annual reports, databases of relevant official authorities, independent research reports and publications, as well as the exclusive database established by Frost & Sullivan over the past decades.

Assumptions:

The market size and forecasts were modeled by Frost & Sullivan based on the following assumptions.

- The social, economic and political conditions in China currently discussed will remain stable during the forecast period;
- Government policies on the toy industry in China will remain consistent during the forecast period;
- The toy industry in China will be driven by the factors which are stated in this report.

Research Scope

Global Toy Industry

Research Period

- Base year: 2023
- Historical: 2019 to 2023
- Forecasting: 2024E to 2028E

Service Market Scope

- Global Toy Industry
  - Global Assembly Character Toy Market

Geographical Scope

- Global
  - China

Content

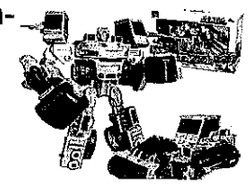
1. Analysis of Global Toy Industry

Analysis of Global Toy Industry
Definition and Classification of Toys

- Toys*, designed for play, are crafted from a variety of materials including wood, clay, paper, and plastic. They can be categorized into character and non-character toys, and further divided into assembly toys and non-assembly toys based on their functionality.

Classification of Toys by Form

- **Character toys** refer to toys with human-like or animal-like appearances, such as dolls, plush toys and toys based on human or non-human characters in movies and television shows. Many character toys are directly associated with specific IPs and have easily recognizable appearances, features and distinctive cultural elements. In addition to character toys, other forms of toys include vehicle toys and scenery toys, which usually do not resemble human or animal.



- **Non-character toys** are those not designed with a specific character as their theme, which usually do not resemble human or animal. These toys include vehicle toys, scenery toys and architectural toys, etc.

Classification of Toys by Functionality

- **Assembly toys** typically involve consumers assembling various components to create the final form, where the parts used generally consist of a high proportion of standardized pieces, often interchangeable among different products within the same assembly system. This definition does not include toys that can be assembled with accessories or highly customized parts, such as Barbie dolls and Gundam figures.

- **Non-assembly toys** are ready-made or pre-assembled toys that do not require user assembly. These toys encompass a broad array of types, including plush toys, figurines, arts and crafts, dress-up and role play toys and so on.

Note: In the report, items such as gambling tools, cards, and table games are considered carriers of games and do not fall under the definition of the toy category.* Source: Frost & Sullivan

Analysis of Global Toy Industry
Toy Industry Chain Analysis

- The Chinas toy market industry is primarily composed of upstream toy raw materials, midstream toy brands and manufacturers, and downstream sales channels. Within this industrial chain, toy brands hold a core position:

Upstream

Raw Materials

- Plastic
- Paper materials
- Fabric
- Metal
- Wooden materials

Mold Supply

- Metal stamping
- Plastic injection molds
- Fabric molds
- Cutting machine tools
- Automated molds

Printing & Painting

- Decorations
- Protective coating

IP Design & Authorization

- Original IP R&D
- Licensing agreements

Midstream

Toy Manufacturers and Brands

Global brands

Domestic brands

Production Modes

- In-house Production
- OEM Production

Downstream

Sales Channels

Offline Stores

- Direct-operated/Licensed Stores
- Art Toys Retailers
- Stationery shops
- .....

E-commerce Platforms

- Traditional E-commerce Platforms
- Emerging E-commerce Platforms

Source: Frost & Sullivan

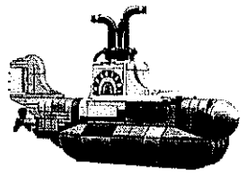
Analysis of Global Toy Industry
Development History of Global Toy Industry

- Looking back at the development of the toy Industry, from the 1980s Bandai launched IP toys to the Bloks Group as the representative of the launch of assembly character toys, a total of five changes, each change will push the toy industry into a new era:

1980s

- **Revolutionary time:** Following the 1979 success of "Mobile Suit Gundam," Bandai launched its first Gundam model, RX-78-2, in 1980, initiating the popular "GUNPLA" series, which sold 6 million units in its first decade.
- **Impact:** Leveraging the success of Japanese tokusatsu series, Bandai quickly expanded into various IP-licensed models, securing a leading position in the anime-licensed toy market and inspiring an industry-wide increase in IP-licensed toy offerings.

1990s



- **Revolutionary time:** LEGO introduced its iconic interlocking bricks in 1958, revolutionizing construction play by offering endless creative possibilities, and expanded its range in the following decades to dominate 80% of the global construction toy industry by 1992.
- **Impact:** The success of LEGO sets elevated construction-based toys in the toy industry, prompting other manufacturers to launch their own building sets in an attempt to replicate LEGO's success.

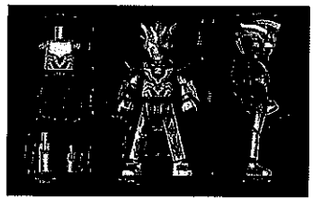
2000s

- **Revolutionary time:** Barbie dolls' popularity in the 2000s initiated a major shift in character toys, with American girls owning an average of 10 Barbies each in 2002 and global sales exceeding 1 billion units by 2009.
- **Impact:** Barbie's principle, enabling girls to imagine themselves in various roles, highlighted the significance of role-playing and storytelling in toys, leading to increased personalization and diversity in the toy industry.

2010s

- **Revolutionary time:** LEGO launched MiniFigures in 1978, revolutionizing brick-based play by incorporating narratives and role-playing, thereby fueling the company's swift expansion. In the 2010s, LEGO introduced diverse IP-licensed MiniFigures.
- **Impact:** LEGO's IP-licensed MiniFigures, such as Disney and Marvel, melded IP, character, and construction features, heralding a new era of toy industry transformation.

2020s



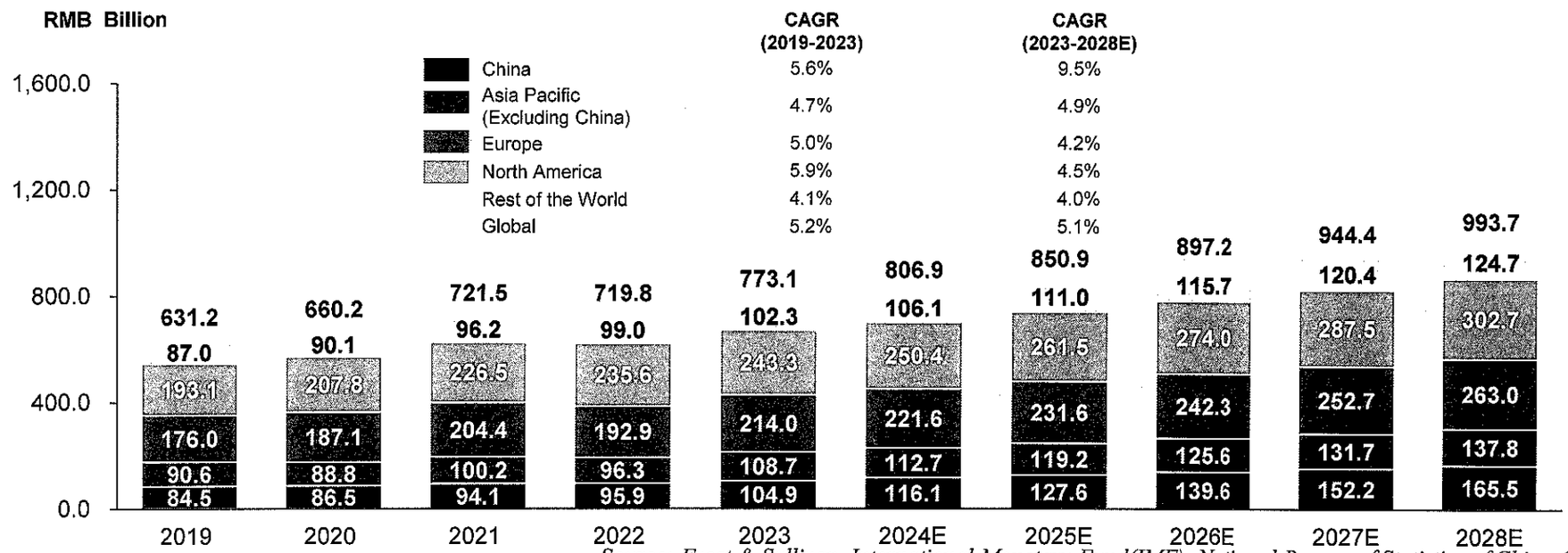
- **Revolutionary time:** In 2021, Bloks Group introduced assembly character toys, innovating beyond traditional LEGO designs with high-fidelity, fully movable joints for greater playability and an original building system.
- **Impact:** By integrating various IPs, including Ultraman, and developing original IPs, Bloks Group advanced the toy industry's combination of IP toys, character toys, and assembly toys, establishing a new industry presence.

Source: Frost & Sullivan

Analysis of Global Toy Industry
Market Size of Global Toy Industry

- The global toy market is massive and is expected to experience steady growth in the future. In terms of GMV, the global toy market grew at a CAGR of 5.2% from RMB631.2 billion in 2019 to RMB773.1 billion in 2023, and is expected to further grow at a CAGR of 5.1% to reach RMB993.7 billion in 2028. Geographically, North America, Europe and Asia are the top three toy markets, with a market size of RMB243.3 billion, RMB214.0 billion and RMB213.6 billion in 2023, respectively. China is the largest producer and one of the largest markets by consumption scale globally, producing the majority of the toy products in the world by volume. In recent years, while China's per capita toy consumption experienced strong growth, China's toy market size remains smaller than that of major toy markets such as the United States and Europe. As such, China's toy market has large growth potential in the future. More specifically, the growth of China's toy market is expected to accelerate, driven by an expanding consumer base and consumers' increasing preference for IP toys, coupled with industry players' continued improvement in their research and development capabilities, product quality and IP commercialization capabilities and emergence of new toy categories in recent years on the supply side. In particular, China's toy market is expected to grow at a CAGR of 9.5% from RMB104.9 billion in 2023 to RMB165.5 billion in 2028, accounting for approximately one-sixth of the global toy market.

Toy Market Size in terms of GMV by Geography, Global, 2019-2028E



Source: Frost & Sullivan, International Monetary Fund(IMF), National Bureau of Statistics of China (NBS)

Analysis of Global Toy Industry
Analysis of the Value and Growth Logic of Character Toys: Inherent Advantage

- Character toys offer unique advantages in terms of imaginative play, emotional engagement, storytelling, collectability, and brand loyalty compared to non-character toys. While both types of toys have their own benefits, character toys provide children with opportunities to connect with beloved characters, immerse themselves in rich narratives, and develop a sense of identity and belonging within their favorite franchises.

Comparison of Character Toys vs Non-character Toys

	Character Toys	Non-character Toys
Imaginative Play	• Offer consumers the opportunity to engage in imaginative play by embodying their favorite characters from movies, TV shows, books, or comics	• Also encourage imaginative play but may not provide the same level of narrative depth. While consumers can still use non-character toys to create imaginative scenarios, they may lack the familiarity and emotional connection associated with specific characters.
Emotional Engagement	• Often evoke strong emotional attachments as consumers develop relationships with their favorite character toys. Playing with character toys can elicit feelings of joy, comfort, and empathy, fostering emotional development and a sense of connection	• May not elicit the same level of emotional engagement, as they lack the personal connection associated with specific characters. While consumers may still form attachments to non-character toys, the emotional impact may be less pronounced.
Storytelling	• Character toys facilitate storytelling as consumers reenact scenes from their favorite movies or create original narratives featuring beloved characters. Playing with character toys encourages language development, creativity, and role-playing skills as consumers bring their stories to life.	• Non-character toys also promote storytelling but may offer more open-ended play opportunities. consumers can use non-character toys to invent their own stories and scenarios, fostering creativity and imagination without the constraints of pre-existing characters or narratives.
Collectability	• Character toys often have collectible appeal, with consumers eagerly seeking out their favorite characters to add to their collections. Collecting character toys can become a hobby, encouraging consumers to explore different franchises and complete sets.	• While some non-character toys may also be collectible, they may not have the same level of appeal as character toys. Collectability in non-character toys often depends on factors such as uniqueness, rarity, or special features rather than character associations.
Brand Loyalty	• Character toys can build strong brand loyalty among consumers who develop preferences for specific characters or franchises.	• Non-character toys may also inspire brand loyalty, but it is typically based on factors such as quality, innovation, or overall play experience rather than character associations

Source: Frost & Sullivan

Analysis of Global Toy Industry
Analysis of the Value and Growth Logic of Character Toys: Compatibility with IP

- The natural compatibility between IP and toys is manifested through early-stage purchasing considerations, mid-term entertainment considerations, and mutual empowerment. By leveraging well-known IP, toy manufacturers can enhance consumer engagement, drive sales, and create more immersive and fulfilling play experiences for consumers. Similarly, IP benefits from the extended reach and deeper connections facilitated by the integration of toys into its ecosystem.

IP Empowerment

- ***IP Influence on Purchase Decision:*** Well-established IP can significantly influence consumers' early-stage purchasing decisions. Consumers are more inclined to choose toys associated with their favorite IP due to the familiarity, trust, and emotional connection they have with the IP. This familiarity often translates into a higher willingness to purchase and a reduced perceived risk associated with the toy
- ***Brand Licensing Opportunities:*** or toy manufacturers, securing licenses for popular IP can open up lucrative opportunities for product development and market penetration. By leveraging the popularity and recognition of established IP, manufacturers can attract more consumers and gain a competitive edge in the crowded toy market
- ***Enhanced Play Experience:*** The integration of well-known IP into toys enhances the mid-term entertainment value for consumers. Toys associated with familiar IP offer consumers the opportunity to extend their engagement beyond the initial purchase through imaginative play, storytelling, and role-playing activities. This prolonged engagement contributes to higher levels of satisfaction and enjoyment for consumers
- ***Interactive and Immersive Play:*** IP-based toys often provide an interactive and immersive play experience, allowing consumers to immerse themselves in the rich storylines and characters of their favorite IP. This interactive nature fosters creativity, imagination, and social interaction among consumers, leading to a more fulfilling play experience

Mutual Empowerment of IP and Toys

- ***IP Empowering Toys:*** Well-known IP empowers toys by providing them with a strong foundation of brand recognition, storytelling, and character appeal. By associating with popular IP, toys can leverage the existing fan base and emotional connection to amplify their market visibility, attract more consumers, and drive sales
- ***Toys Enhancing IP Engagement:*** Conversely, toys can enhance the engagement and reach of IP by extending its presence into the physical realm and fostering deeper connections with consumers. Toys serve as tangible extensions of the IP, offering fans new avenues to interact with their favorite characters and immerse themselves in the IP's world beyond traditional media formats.

Source: Frost & Sullivan

Analysis of Global Toy Industry
Analysis of the Value and Growth Logic of Character Toys: IP Empowerment (1/2)

- Over the past century, the global toy market has experienced an embryonic period, growth period, and rapid development period. Among them, the internet and mobile internet have led to the comprehensive penetration of IP culture into various consumer groups, becoming the primary driving force in the current stage of the toy market. In the Chinese market, the toy industry is still dominated by overseas manufacturers and foreign IPs. However, it is expected that in the future, with leading toy manufacturers continuing to launch new products and the accelerated development of domestic IP, domestic toys and IP are likely to take the lead and become more globalized.

Development History of the Global Toy Industry

Embryonic Period

Simpler in design and construction compared to contemporary toys, emphasizing on practicality and cognitive enhancing

1900

Growth Period

The variety of toy products has significantly increased, with a greater emphasis on product appearance design and attractiveness. At the same time, toy manufacturers have also begun to focus on brand and sales channel development

1960

2023

Rapid Development Period (IP Driven)

The rapid development of the internet and mobile internet has led to the comprehensive penetration of IP culture into various consumer groups. Toy companies have begun to focus on IP creation and further strengthen their efforts in product design and platform-based sales channel operations

Development History of the China's Toy Industry

Embryonic Period	Growth Period	Rapid Development Period	Transformation Period
1990-2010	**2010-2020**	**2020-2030**	**2030+**
Dominated by global toy brands, relatively low IP penetration *Social economic Background: Low income Level; Movie industry began to rapidly develop*	Dominated by global IPs; Chinese toy brands began to capture more market share *Social economic Background:* Medium income level; Mobile internet began to rapidly develop	Chinese toy brands continue to grow; Toys based on Chinese IPs begins to develop *Social economic Background:* Medium to high income level; More diversified media channels	Chinese toy brands and IPs begin to capture global toy market share *Social economic Background: High income Level*

Source: Frost & Sullivan

Analysis of Global Toy Industry
Analysis of the Value and Growth Logic of Character Toys: IP Empowerment (2/2)

- The empowerment of toys by IP can be seen in several aspects. Firstly, through collaboration with renowned IPs or ownership of proprietary IP, toy companies gain a distinct competitive differentiation advantage in the fiercely competitive market, attracting consumer attention and setting themselves apart from competitors. Secondly, toys associated with popular IPs often evoke emotional resonance with consumers, fostering deep emotional connections and cultivating loyalty, making consumers willing to purchase related products. Other aspects of IP empowerment includes market promotion, consumer base, risk management, etc.

Empowerment of IPs to the Toy Industry

	Pain Point of the Toy Industry	Empowerment of IPs
Competitive Differentiation	• In the absence of breakthroughs in new technologies and materials, innovation in the toy industry faces significant challenges. In the market, there are numerous similar toy products, making it difficult to highlight the uniqueness of each product, leading to intense competition.	• By collaborating with well-known IPs ,toy manufacturers can obtain unique brand images and storylines, thereby standing out in the intense market competition and attracting more consumers.
Emotional Connection and Loyalty	• Without the support of IPs, brands need to establish emotional connections with consumers and brand loyalty through other means. This requires higher investment in research and development and can be challenging to sustain in the long term.	• Attractive IPs can indeed help toy brands establish emotional connections and loyalty with consumers. Consumers may develop emotional attachments to their favorite IPs, leading them to prefer related toy products and maintain long-term support for the brand.
Market Promotion	• Traditional marketing and promotional methods often yield limited results and come with high costs.	• Leveraging well-known IPs for marketing and promotion is generally easier and more effective. Consumers are more interested in products related to their favorite IPs, which can significantly reduce the costs of promotion and marketing.
Consumer Base	• Toy manufacturers often have limited avenues to explore, making it challenging to expand into new product lines and target audiences.	• Frequently, the fans of popular IPs differs from the original consumer base of toy manufacturers. Collaborating with well-known IPs can expand the user base for toy manufacturers.
Risk Management	• The market competition is fierce, and new products face high risks of failure.	• Consumers are more interested in products related to their favorite IPs, ensuring a stable audience base and thereby reducing the risk of product failure after launch.

Source: Frost & Sullivan

Analysis of Global Toy Industry
Market Size of Global and China's Character and Non-Character Toy Market (1/3)

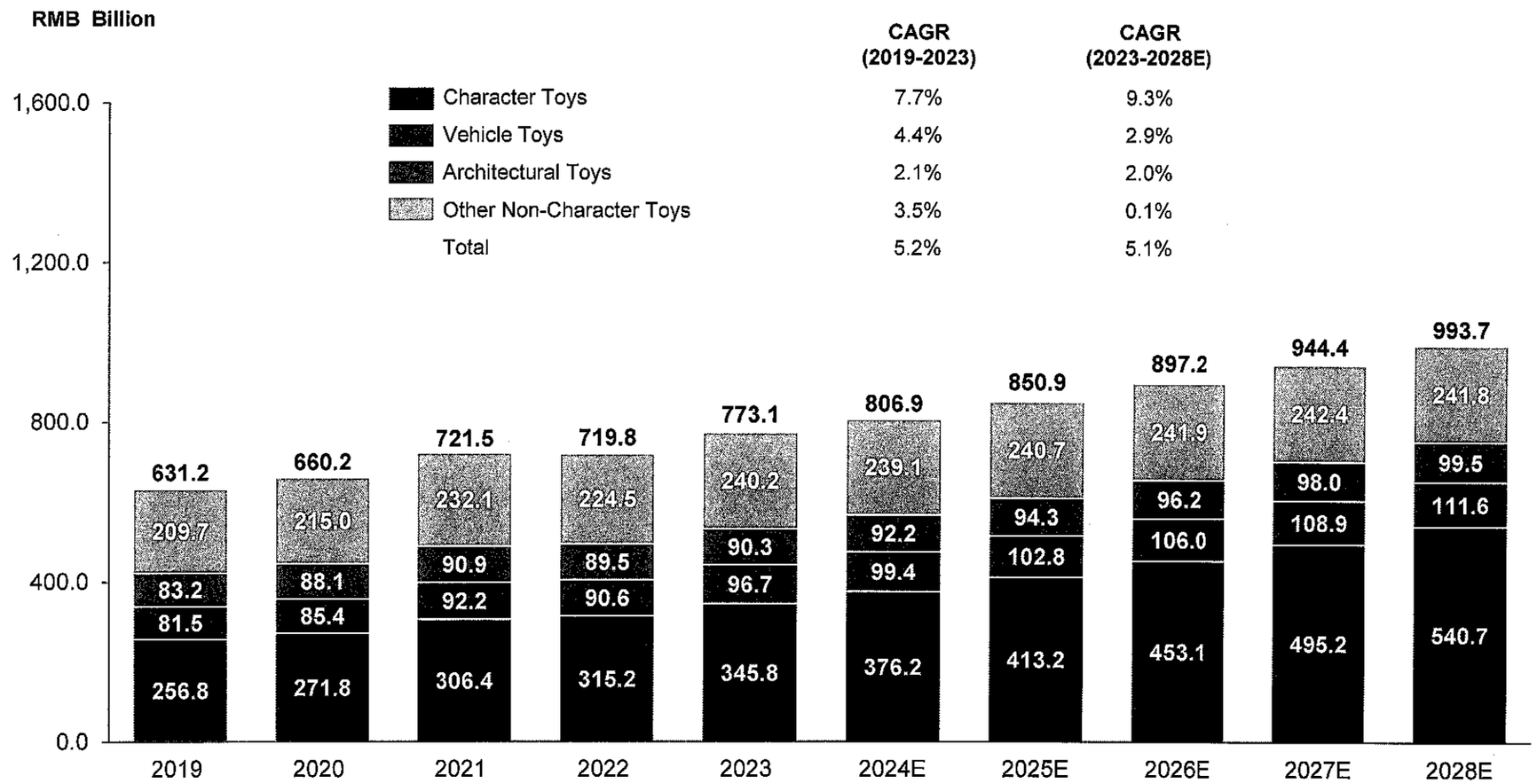
- Character toy market is the largest segment of the global toy market by form, and has a market size of RMB345.8 billion in 2023 that accounted for 44.7% of the global toy market. The popularity of character toys is firstly attributable to the fact that character toys feature both fun and individuality given they are often based on images resonating with the public. In addition, character toys provide emotional engagement and vibrant experience that noncharacter toys cannot deliver. Furthermore, character toys are increasingly combined with renowned IPs to gain high recognition. Enabled by the rich IP contents, character toys cover a diverse range of toy categories, reach a wide consumer demographics, and possess collectability. As a result, the market size of character toys is expected to grow at a CAGR of 9.3% from 2023 to 2028, much higher than the 1.2% CAGR of non-character toys segment during the same period. The market size of the global character toys is expected to reach RMB540.7 billion in 2028, accounting for 54.4% of the global toy market. China's character toy market is expected to grow at a CAGR of 17.7% from RMB40.3 billion in 2023 to RMB91.1 billion in 2028. Compared to the global market, the fast growth rate of China's character toy segment is primarily due to factors such as a vast and expanding consumer base, the increasing presence of IP toys and more quality toy supply.

- The global non-character toy market consists of several segments, among which vehicle and architectural toys are the second and third largest segments by form in the global toy market, with a market size of RMB96.7 billion and RMB90.3 billion in 2023, respectively, accounting for 12.5% and 11.7% of the global toy market. Vehicle toys are toys that take the form of passenger- or cargo-carrying vehicles, such as cars, trains, ships, airplanes, spacecrafts and rockets. Architectural toys are toys that take the form of buildings or scenic landscapes, such as houses, skyscrapers, castles, bridges, harbors and streets. The design of vehicle and architectural toys poses high requirements for physical structure, spatial perception and balanced proportions. The toys can be either finished products or assembly kits. As a result, vehicle and architectural toys provide consumers the flexibility to unleash their imagination and creativity in addition to recreating the form of a subject. Vehicle and architectural toys can be played with independently or together with other toy categories to expand thematic scenes and enhance play experience. From 2023 to 2028, markets for vehicle and architectural toys are expected to grow at a CAGR of 2.9% and 2.0%, respectively, to reach RMB111.6 billion and RMB99.5 billion. In addition, from 2023 to 2028, markets for vehicle and architectural toys in China are expected to grow at a CAGR of 6.3% and 5.3% to reach RMB20.5 billion and RMB18.2 billion, respectively. In particular, the global and China's vehicle toy market reached RMB96.7 billion and RMB15.1 billion in 2023, and is expected to grow at a CAGR of 2.9% and 6.3% to reachRMB111.6 billon and RMB20.5 billion in 2028, respectively.

Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Market Size of Global and China's Character and Non-Character Toy Market (2/3)

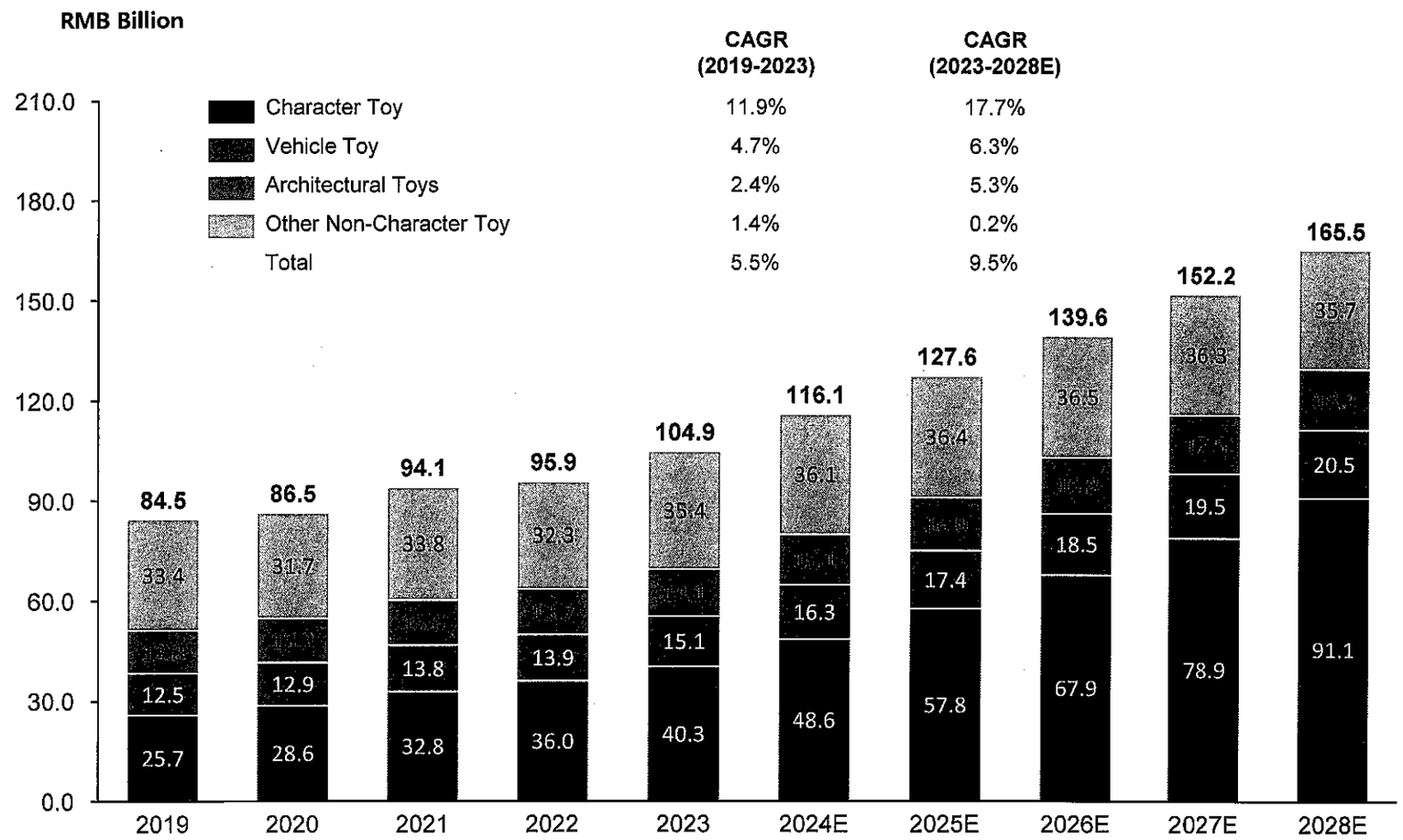
Toy Market Size in terms of GMV by Form, Global, 2019-2028E



Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Market Size of Global and China's Character and Non-Character Toy Market (3/3)

Toy Market Size in terms of GMV by Form, China, 2019-2028E



Source: Frost & Sullivan, National Bureau of Statistics of China (NBS)

Analysis of Global Toy Industry
Market Size of Global and China's Assembly Toy Market (1/5)

- Assembly toys represent a fast-growing segment within the global toy market. Assembly toys generally require consumers to invest time in assembling various components of different shapes, sizes and functions into finished toys resembling different subjects such as characters, vehicles and buildings.

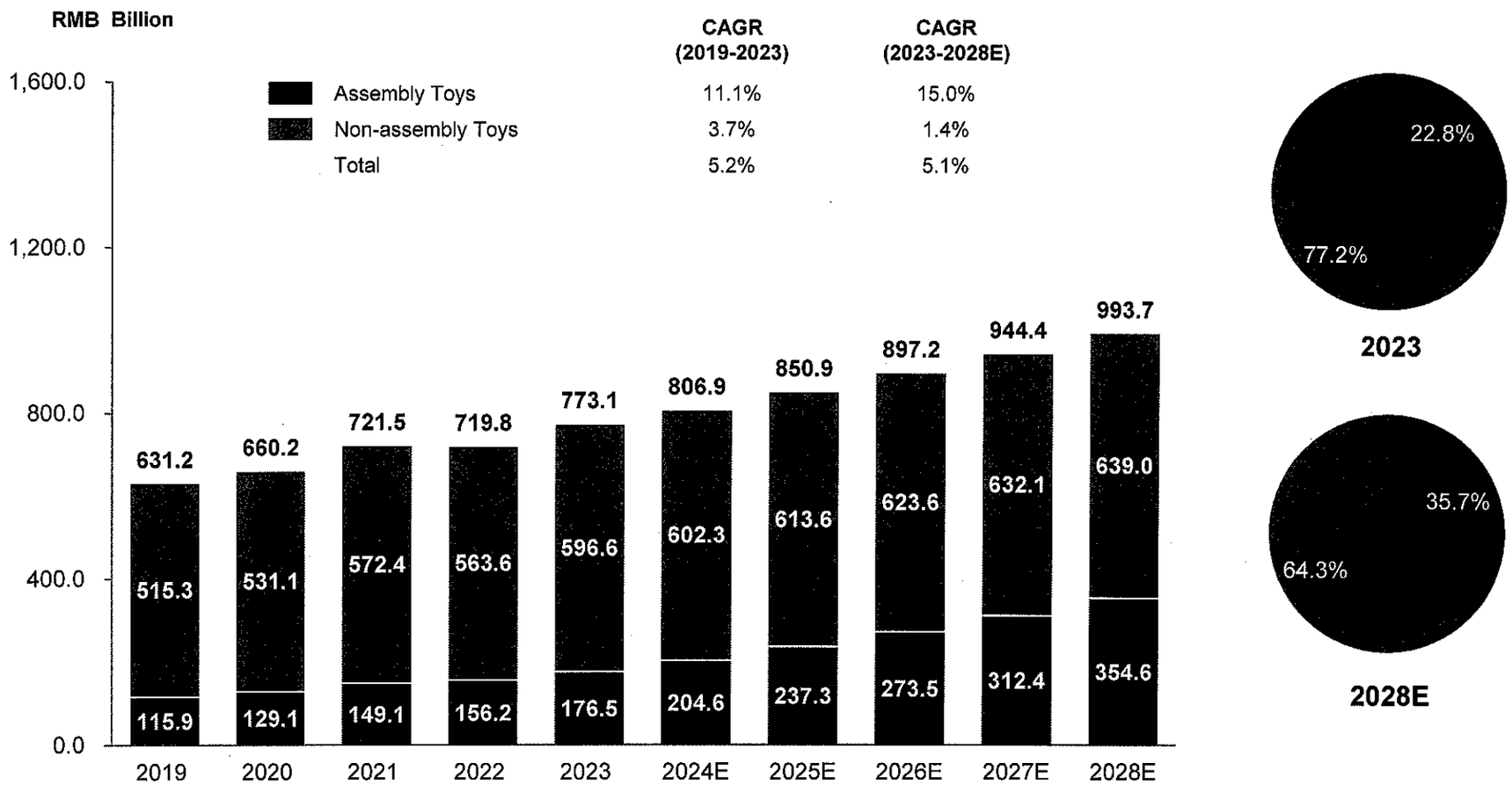
- Assembly toys can be assembled into a predetermined structure following the product design or can be assembled based on individual consumer's creativity and preferences. This makes assembly toys more fun to play with and intellectually stimulating. In addition, the components used in assembly toys generally contain certain proportion of standard components, which can be compatible among different products. This brings about stronger consumer engagement and brand loyalty and enables better control over quality and cost by the producers. The global market size of assembly toys was RMB176.5 billion in 2023. Although this segment only accounted for 22.8% of the global toy market in 2023, it grew at a CAGR of 11.1% from 2019 to 2023, and is expected to grow at a CAGR of 15.0% from 2023 to 2028, far outpacing the growth rate of non-assembly toys.

- Driven by similar factors that drive the growth of China's toy market and character toy market, China's assembly toy market is expected to grow at a CAGR of 22.1% from RMB23.7 billion in 2023 to RMB64.0 billion in 2028. Within China's assembly toy market, the assembly character toy segment is expected to lead this growth. The market size is projected to grow at a CAGR of 41.3%, from RMB5.8 billion in 2023 to RMB32.5 billion in 2028. The assembly vehicle toy market is expected to be the second fastest-growing segment, with its market size increasing from RMB3.3 billion in 2023 to RMB7.3 billion in 2028, representing a CAGR of 17.2%. Additionally, the assembly architectural toy market is anticipated to grow at a CAGR of 8.5%, expanding from RMB13.0 billion in 2023 to RMB19.5 billion in 2028.

Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Market Size of Global and China's Assembly Toy Market (2/5)

Toy Market Size in terms of GMV: Assembly Toys and Non-assembly Toys, Global, 2019-2028E

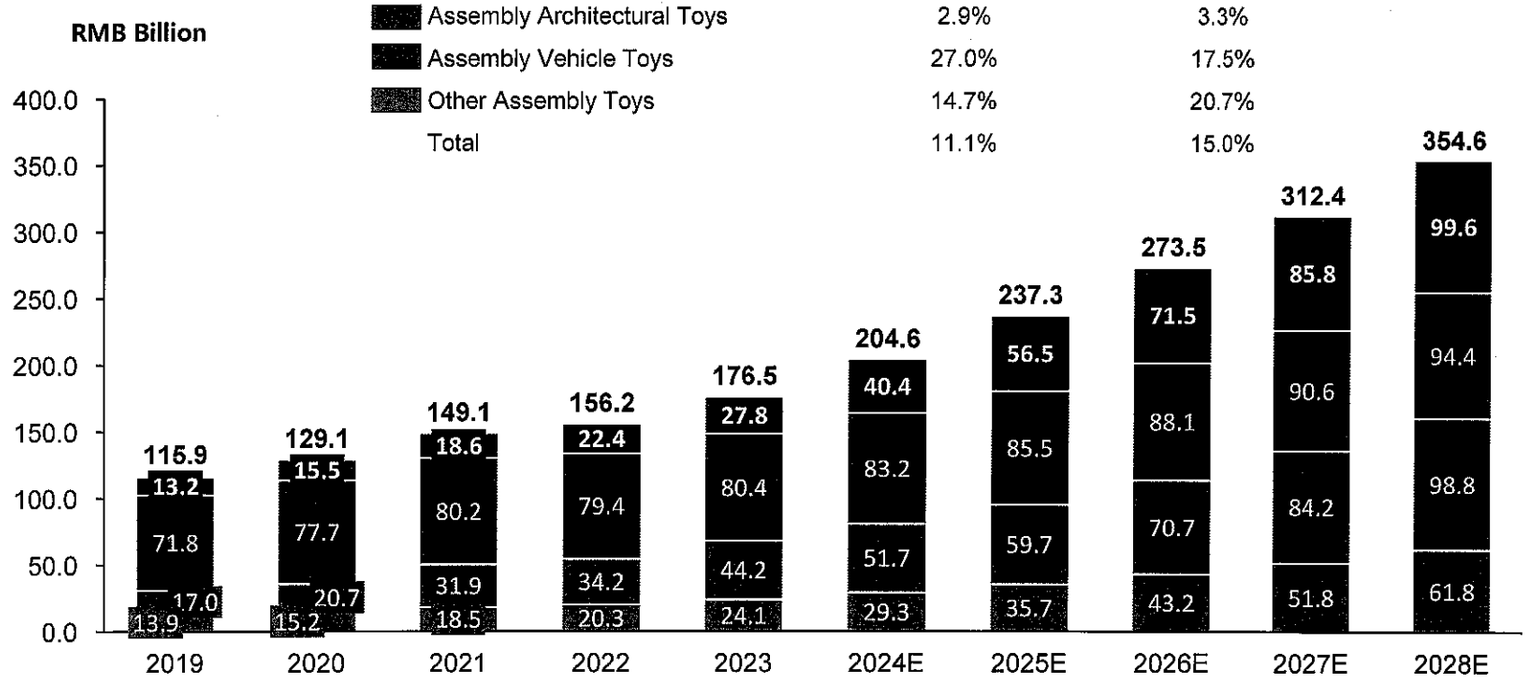


Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Market Size of Global and China's Assembly Toy Market (3/5)

Toy Market Size in terms of GMV: Assembly Toys, Global, 2019-2028E

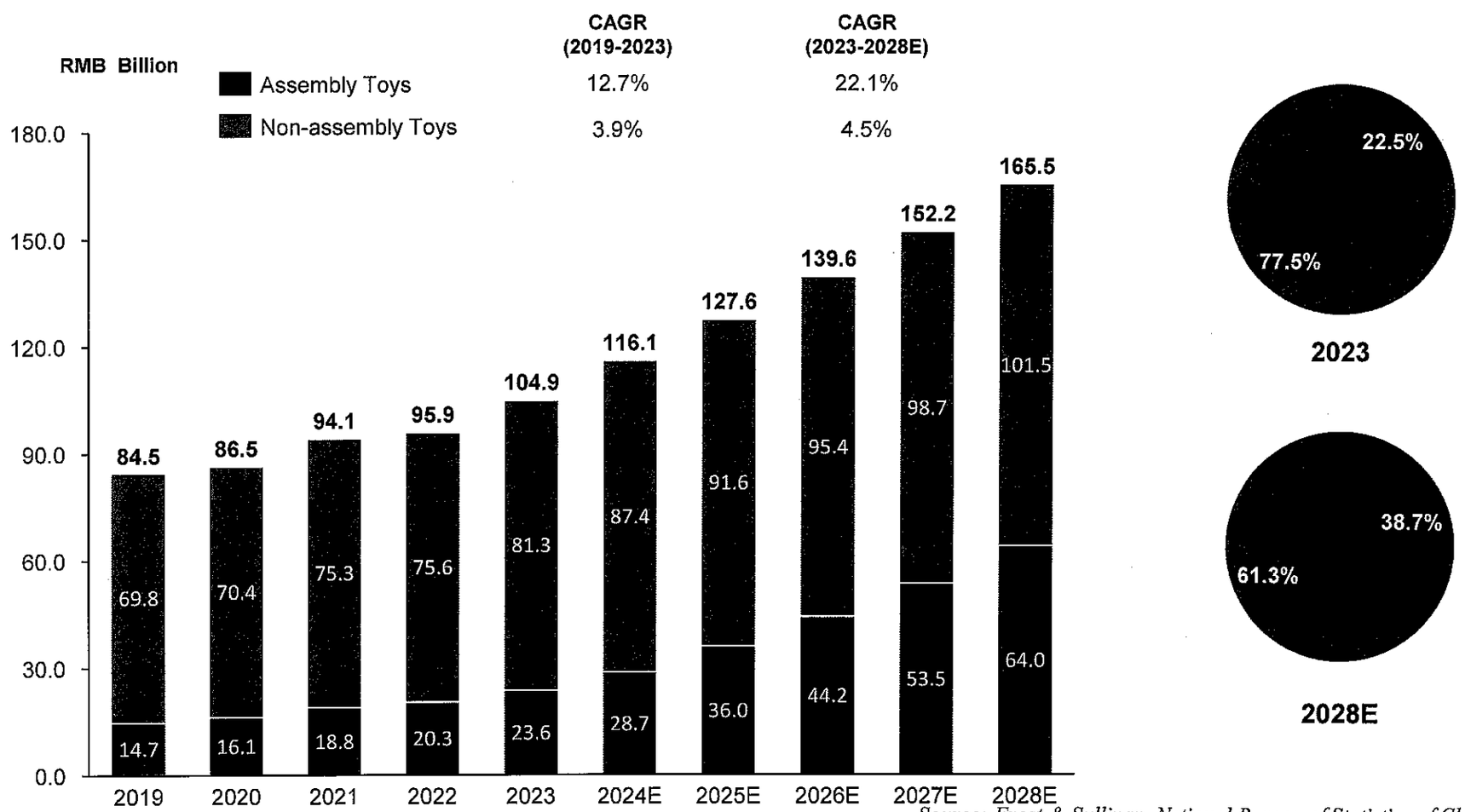
	CAGR (2019-2023)	CAGR (2023-2028E)
Assembly Character Toys	20.5%	29.0%
Assembly Architectural Toys	2.9%	3.3%
Assembly Vehicle Toys	27.0%	17.5%
Other Assembly Toys	14.7%	20.7%
Total	11.1%	15.0%



Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Market Size of Global and China's Assembly Toy Market (4/5)

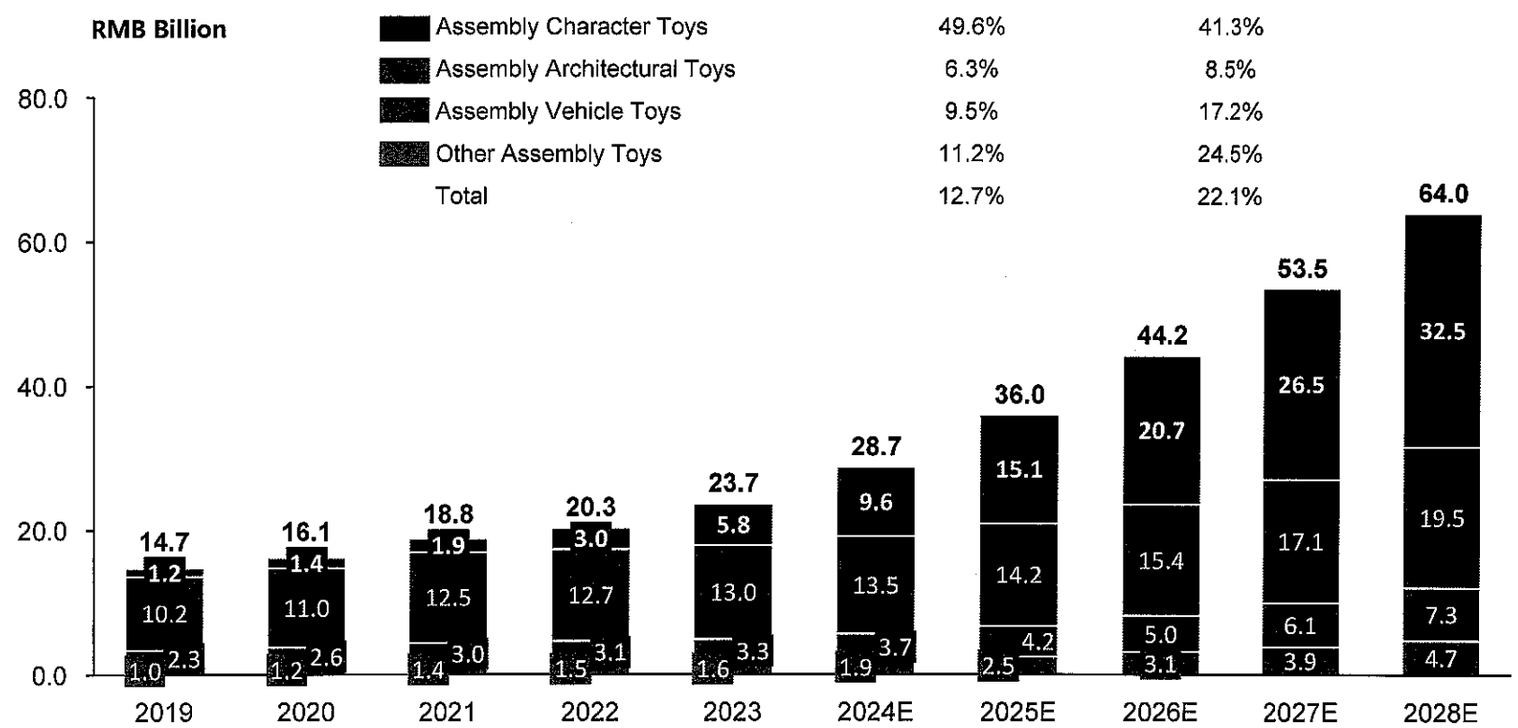
Toy Market Size in terms of GMV: Assembly Toys and Non-assembly Toys, China, 2019-2028E



Source: Frost & Sullivan, National Bureau of Statistics of China (NBS)

Analysis of Global Toy Industry
Market Size of Global and China's Assembly Toy Market (5/5)

Toy Market Size in terms of GMV: Assembly Toys, Global, 2019-2028E



	CAGR (2019-2023)	CAGR (2023-2028E)
Assembly Character Toys	49.6%	41.3%
Assembly Architectural Toys	6.3%	8.5%
Assembly Vehicle Toys	9.5%	17.2%
Other Assembly Toys	11.2%	24.5%
Total	12.7%	22.1%

Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Issues in the Global Character Toy Market

There are three major issues for the global character toy market:

Consumer End.

There is significant room for improvement in efficiently meeting consumer demand for products that combine interactivity, consistent quality and great value-for-money. Most character toys are not highly interactive. For example, dolls and plush toys are mostly sold as finished products which are ready to play straight out of box, making the ways for consumers can interact with them simple and limited. Meanwhile, many character toys are offered as individual products rather than in series, which results in a lack of [strong] collectability. In terms of quality, the diverse range of character toys and varying operational scales and production techniques of industry players result in inconsistent product quality, such as finishing, texture and appearance. In terms of pricing, a large amount of labor input in the production of many traditional character toys results in relatively high prices that do not meet the widespread consumer demand for value-for-money products.

Supply End.

Product design, research and development and production for many traditional character toys are not highly standardized, which leads to room for improvement in efficiently meeting consumer demand for quality-for-money products. Since establishing a standardized system requires heavy investment including time, labor and production resources (such as production lines and molds), continuous and large-scale toy orders are a prerequisite for systemic standardization. Currently, many industry players primarily operate on the basis of scattered orders for non-standardized products, make limited investment in standardization, and employ a substantial proportion of labor in their supply chain, resulting in a low degree of standardization. Some large-scale industry players focus more on the scale of SKU number rather than systemized and compatible product offering, and therefore have lower need on a highly standardized system of product design, research and development and production. The overall low degree of standardization in the character toy market leads to varying quality at the same price level, and many companies have difficulties in quickly launching new products in response to the evolving consumer preferences. For example, even products licensed by the same IP proprietor may vary significantly in quality due to differences in production resources, techniques and geographical location among different toy companies, which in turn leads to inconsistent consumer experience. In addition, traditional character toy companies typically take approximately 10 to 12 months from conceptualization to mass production of new products, which is a long cycle in view of the rapidly evolving consumer preference.

Industrial Ecosystem End.

IP proprietors wish to quickly commercialize their IPs through toy categories that effectively represent their IPs and cover wide demographics, price segments and global markets. Although many character toy categories can recreate the IP character relatively well, it remains difficult for these categories to achieve full coverage across different demographics, price segments and geographical markets. Specifically, many character toys have limited target audience due to constraints in their categories (such as dolls and plush toys) and mechanism, making it challenging to achieve penetration into a larger population. In addition, since many industry players offer products within a narrow price range, they are unable to fully reach consumers across different price segments, including value (unit retail price below RMB20), mass-market (unit retail price between RMB20-below 50), mid-end (unit retail price between RMB50-below100) and high-end (unit price RMB100 and above). Finally, the potential for global expansion of many character toys is relatively limited due to the fact that their mechanism cannot meet the universal demand of global consumers for toys that are interactive and easy to play with. As a result, there are few character toy categories that can meet the demand of IP proprietors to commercialize their IPs efficiently at scale, and to cover all demographics, all price segments and global consumers.

Source: Frost & Sullivan

Analysis of Global Toy Industry
Definition and Classification of IP and IP Operation

Definition

- Common intellectual property rights include copyright, trademark, patent, portrait, design, trade name and so forth. Beloved by a massive fan base, toy IPs have tremendous commercial value. Since consumers have been passionately engaged with leading toy content and those content are easy to be adapted, cross-border cooperation by IP licensing has been extended to a wide range of fields.
- IP operation can be categorized into three categories, merchandise licensing, space licensing and IP adaptation.

IP Operation

Merchandise licensing refer that the owner of intellectual property, notably in the form of a trademark, service mark or copyright, grants a party, called the licensee, the right to use the property for distribution, marketing, and sale.

Toys

Apparel

Space licensing

Space licensing refers to using IP and related concepts to conduct various events, such as comic conventions, exhibitions with interaction experience and pop-up stores, with the purpose to sell IP-related products. Another form of space licensing is theme parks with IP features, such as Disney Land.

Conventions and exhibitions

Theme parks

IP adaptation refers to a pre-existing intellectual property that a studio/company is producing with the purpose of changing it to another form. For example, it can be a comic that is adapted to a movie, or a novel that is adapted to a TV series.

Movies

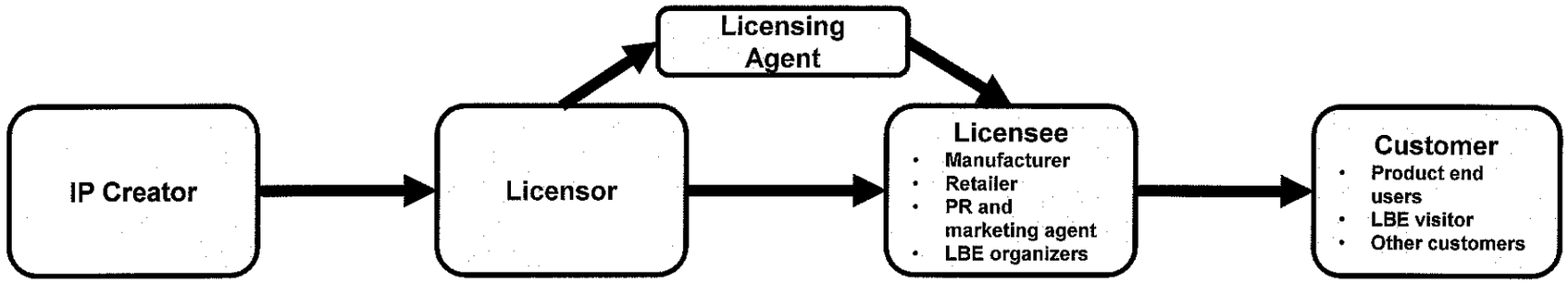
Source: Frost & Sullivan

Analysis of Global Toy Industry
The Process of IP Licensing

- IP Licensing refers to the mechanism that the licensor or licensing agent authorises the licensee to use the IP rights by contracts and usually charge royalty as a proportion of sales of licensed goods or fixed fee over a time period. Licensors can directly contact with licensees, or licensing agents can work as the brokers between the licensors and licensees and monitor on behalf of licensors the usage of IPs by licensees. The major consumers in licensing market generally include IP creators, licensors, licensing agents and licensees.

- The following chart shows the value chain of IP licensing market:

The Process of IP Licensing



- IP creators are individual or groups of artists, musicians, writers and designers, etc. who create IPs through various carriers such as images, novels, cartoons, music, movies, etc., which attract audience's attention and likeness.

- Owners of IPs
- Charging the licensee a royalty fee for the right to use IPs.
- Licensors can buy IPs from original IP creators or be IP creators themselves
- Some licensors provide brand or image management and design consultation services to the licensees.

- The licensee could be manufacturer, retailer, public relations and marketing agent, LBE organizer or etc. who would make use of the benefit from the awareness and attractiveness of the IP to manufacture products and to organize activities/events

- End users who are purchasing licensed goods or participate in licensed activities/events.

Source: Frost & Sullivan

Analysis of Global Toy Industry
Valuable IPs in the World

Top 10 Most Valuable IPs in the World

Rankings	IP Series	Year of Issue	Total Valve*	Primary Monetization Channels	Original Carriers	IP Owners
1	**Pokémon**	1996	~$110 B	• Merchandise Licensing • Video Games • Box Office Revenue • Home Entertainment • Strategy Guides • Themed Aircraft	Video Games	Pokémon Company, Nintendo
2	**Hello Kitty**	1974	~$90 B	• Merchandise Licensing • Box Office Revenue • Retail	Giftware/Image	Nintendo
3	**Mickey Mouse and Friends**	1928	~$80 B	• Box Office Revenue • Home Entertainment • Retail	Animated Film	Walt Disney
4	**Winnie the Pooh**	1924	~$80 B	• Box Office Revenue • DVD&Blue-ray Sales • Merchandise Licensing	Books	Walt Disney
5	**Star Wars**	1977	~$70 B	• Box Office Revenue • Home Entertainment • Video Games • Television Revenue	Movie	Lucasfilm (Walt Disney)
6	**Disney Princesses**	2000	~$50 B	• Retail • Home Entertainment • Retail	Animated Movie	Walt Disney
7	**Anpanman**	1973	~$50 B	• Box Office Revenue • Exhibitions	Comic	Froebel-Kan
8	**Marvel Cinematic Universe (MCU)**	2008	~$40 B	• Box Office Revenue • Merchandise Licensing • Home Entertainment	Movie	Walt Disney, Sony (Spider-Man), Universal Pictures (Hulk)
9	**Mario**	1981	~$40 B	• Video Games • Merchandise Licensing • Box Office Revenue	Video Games	Nintendo
10	**Harry Potter**	1977	~$30 B	• Box Office Revenue • Merchandise Licensing • Book Sales • Home Entertainment • Video Games • Television Revenue • Stage Performances	Novel	J.K. Rowling (Books), Warner Bros. (Films)

Total Value refers to a rough estimate of the monetization value since the IP was released, up to the present*

Source: Frost & Sullivan

Analysis of Global Toy Industry
Cases of Successful Long-lasting Character IPs

- There are cases for successful character IPs which still have strong market presence and commercial value after nearly 50 years since their inception. Generally, they have shared several characteristics in common:
  - Adorable and cute image and personality;
  - Reliable licensor who is determined and capable to promote and operate the IPs;
  - Effective promotion channels which are attractive and accessible to the young generation and evolving with times;
  - Continuous operation and public exposures.

Cases of Successful Long-lasting IPs

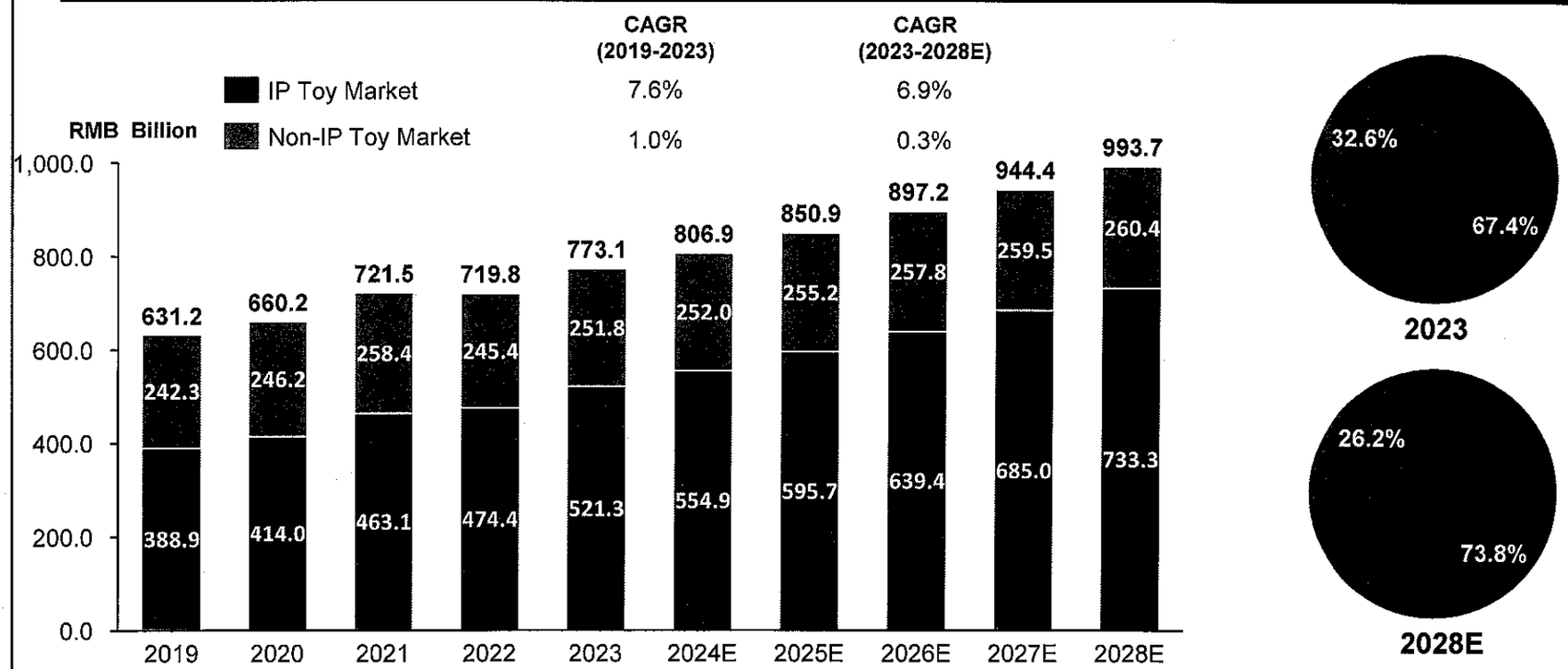
	Image	Licensor	Channel	Operations
Mickey Mouse 	Several artists perfected the image of Mickey Mouse and made the image adorable. Mickey mouse appeared in the first sound cartoon, Steamboat Willie(1928), which was very popular in that period.	Disney was established as a animation studio and later grew into the largest licensor in the world.	Mickey mouse appeared in over 130 films and became the first cartoon character on the Hollywood Walk of Fame. With these cartoon films, Mickey Mouse became famous all around the world.	With the strong operation ability of Disney, Mickey Mouse appeared in Disneyland's all around the world and on lots of products including fashion accessories, toys, apparels, etc.
Ultraman 	Ultraman is portrayed as a heroic figure, towering with a sleek, metallic design, symbolizing strength and justice. Originating from the 1966 Japanese television series, Ultraman has become an iconic character in the tokusatsu genre.	Tsuburaya Productions, the creator of Ultraman, oversees its licensing, maintaining the integrity and promoting the expansion of the Ultraman franchise globally.	Ultraman has been featured in numerous television series, movies, and spin-offs, reaching audiences worldwide through both traditional broadcasting and digital platforms.	Ultraman merchandise, including toys, clothing, and collectibles, is widely available, supported by Tsuburaya Productions' partnerships with various distributors and retailers globally.
Marvel Cinematic Universe 	Marvel Universe heroes, such as Spider-Man, Iron Man, and the Avengers, are characterized by their complex personalities and moral dilemmas, making them relatable and inspiring. Their stories cover a wide array of themes, from personal loss to battles for the fate of the universe.	Marvel Entertainment, a subsidiary of The Walt Disney Company, is the licensor, managing an extensive portfolio of characters and stories.	Marvel heroes dominate multiple channels, including blockbuster films, comic books, TV series on streaming platforms, and appearances in merchandise..	Marvel's operation strategy involves theme parks, merchandise, and interactive experiences, ensuring that Marvel Universe heroes are an integral part of popular culture and consumer products worldwide.

Source: Frost & Sullivan

Analysis of Global Toy Industry
Market Size of Global IP Toy Market

- IP toy segment is a major component of the global toy market with a market size of RMB521.3 billion in 2023, accounting for 67.4% of the global toy market. IP toys are toy products designed and produced based on intellectual property rights associated with storyline characters, brands, art and culture, etc. The popularity of IP toys is driven by renowned IPs' high recognition as well as their narrative nature combined with rich contents, leading to easy consumption decisions by consumers. In addition, the broad fan base of IPs and the long-term emotional connection between fans and IPs further expand the consumer base. With the popularity of various types of IPs such as characters in films, television shows and animes around the world, and the growing IP commercialization capabilities in the toy industry, the global IP toy market as a percentage of the global toy market is expected to grow further and reach 73.8% in 2028.

Toy Market Size in terms of GMV: IP Toys and Non-IP Toys, Global, 2019-2028E



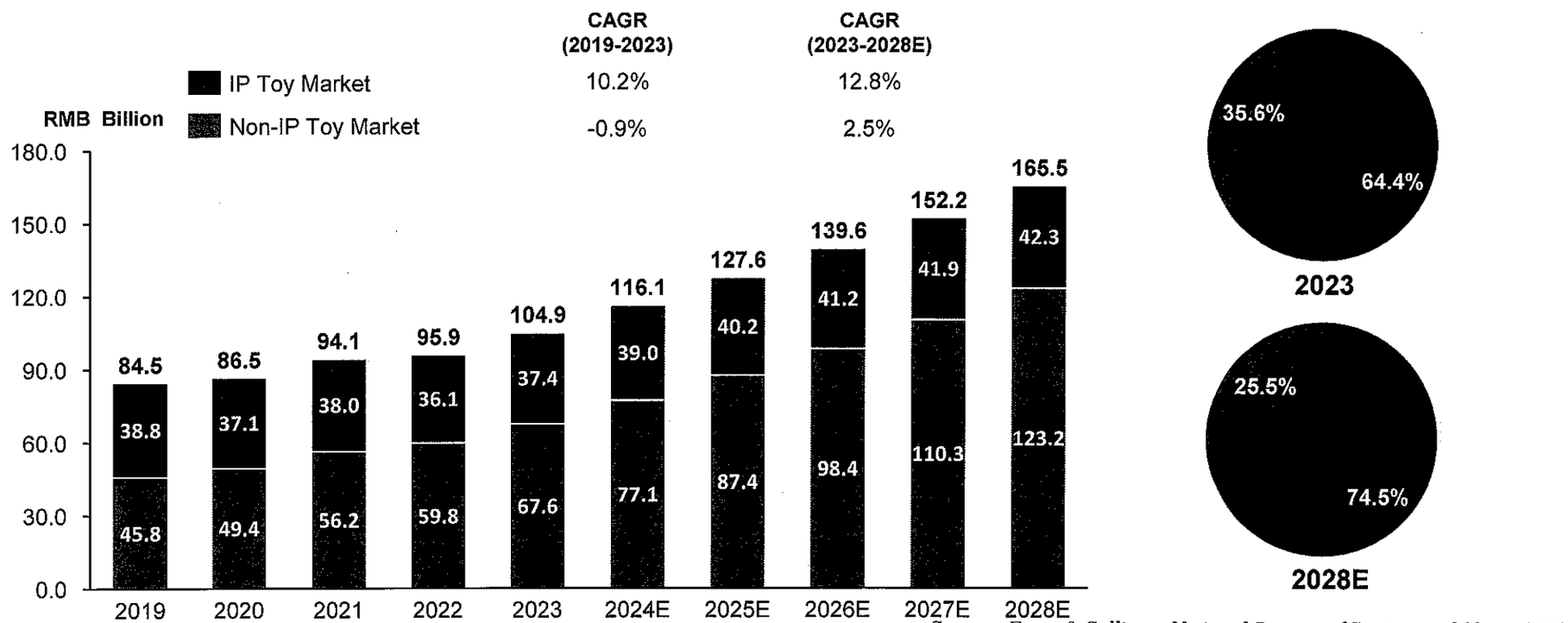
IP toys refer to toys with IP attributes, including those like the Forbidden City, Chinese mythological heroes, and others that do not require IP licensing.*

Source: Frost & Sullivan, International Monetary Fund(IMF)

Analysis of Global Toy Industry
Market Size of China's IP Toy Market

- China's IP-related industries started later than other regions of the world. However, in the past five years, with the rapid growth of China's IP-related product market, China's IP toy market has expanded quickly. Domestic toy brands have swiftly capitalized on this trend, making significant contributions to the market's overall growth. From 2019 to 2023, China's IP toy market size grew from RMB45.8 billion to RMB67.6 billion, with a CAGR of 10.2%, surpassing the global average. Looking forward, the growth rate of China's IP toy market is expected to peak and then decelerate. The market size is projected to reach RMB123.2 billion in 2028, with a CAGR of 12.8% from 2023 to 2028. By then, the market share of China's IP toys is expected to rise from 64.4% in 2024 to 74.5% in 2028.

Toy Market Size in terms of GMV: IP Toys and Non-IP Toys, China, 2019-2028E



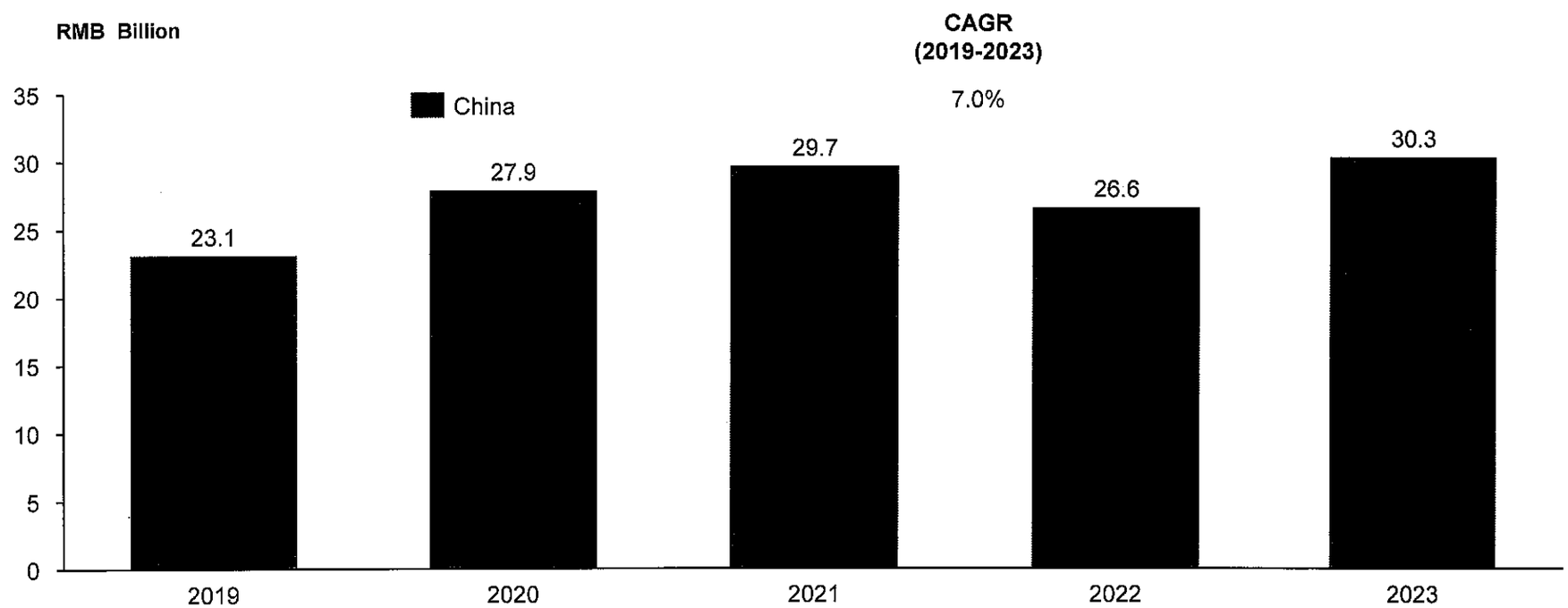
Source: Frost & Sullivan, National Bureau of Statistics of China (NBS)

Analysis of Global Toy Industry
Market Size of China's Video Game Market

- As a vital segment of the entertainment industry, the growth of the gaming sector is closely tied to the broader socio-economic landscape and the evolution of the digital industry. Thanks to the expansion of China's overall digital industry, the country's video game industry has enjoyed sustained rapid development over a significant period in the past.

- However, in recent years, as economic growth has moderated and the demographic advantages previously bolstering the gaming sector have begun to wane, the industry is transitioning into a phase of stable development. From 2019 to 2023, China's video game market expanded from RMB23.1 billion to RMB30.3 billion, achieving a CAGR of 7.0%.

Video Game Market Size in terms of Revenue, China, 2019-2023



Source: Frost & Sullivan, National Bureau of Statistics of China (NBS)

Analysis of Global Toy Industry
Trends in the Video Game Industry – Video Game IP Thematization

1 Market Expansion and Fan Base Development

- The growth of the Chinese gaming market, coupled with the increase in its dedicated fan base, offers significant motivation for developers to harness popular Intellectual Properties (IPs). By utilizing well-known IPs, developers can tap into established audiences, attract new consumers, and ensure a loyal following. These IPs, often derived from beloved franchises in film, literature, and television, come with a ready-made emotional connection that can drive game adoption and long-term engagement.

2 Increasing Revenue Streams

- Creating games based on popular IPs offers economic advantages, opening doors to diversified revenue streams that extend beyond the game itself. Merchandising, film adaptations, books, apparel, and collectibles are just a few avenues through which a game can bolster its profitability and lifespan. This ecosystem not only increases revenue but also solidifies the game's presence across various platforms and enhances brand visibility and fan engagement. These strategies synergistically feed back into the game's popularity, creating a loop of ongoing engagement and profit.

3 Technological Advancements

- The rise in technological capabilities allows for more sophisticated game designs and systems that can better support IP-based content, encouraging game developers to create games around specific IPs.

Source: Frost & Sullivan

2. Analysis of Global Assembly Character Toy Market

Analysis of Global Assembly Character Toy Market
Overview of Global Assembly Character Toy Market

- Over the past few years, assembly character toys, which combine the advantages of assembling mechanism and character toys, have experienced rapid growth along with the development of the global and China's character toy market. Industry players typically design and produce assembly character toys using two forms: block kits and model kits, both offering better play experience than traditional character toys. Block kits use block components to recreate the IP characters and simulate their poses, and are highly standardized and easy to play with. Model kits, on the other hand, involve the assembly of components and prioritize on high degree of recreation of IP characters using a large proportion of customized components, which determines the price tag of products and difficulty in assembling. With a different product approach, a new category of assembly character toys were developed and offered consumers a new choice. For example, our assembly character toys leverage the advantages of character toys and assembling mechanism and improve thereupon, and can effectively meet consumer demand for products that are fun with consistent quality and great value-for-money, enjoying significant differentiated advantages over traditional character toys. Our assembly character toys combine the high degree of standardization and ease-of-play and features of high degree of recreation of IP characters and individuality. In addition, by establishing an integrated standardized system of design, research and development and production on the supply end, we have achieved cost advantages and solid quality control. These factors lead to better value-for-money for assembly character toy.
- The Company's assembly character toys recreate the essence of the IP characters with a combination of standard and customized components, but precise recreation of the IP characters is not the main purpose. Meanwhile, consumers can enjoy the Company's assembly character toys by assembling the IP character, posing the completed IP character and performing re-touch, meaning painting the character toys in different or additional color themes. As such, the Company's assembly character toys offer strong engagement. The combination of standard and customized components and patented connection mechanisms make the Company's assembly character toys easy to assemble. The use of standard components and standardized design, research and development and production also facilitate cost control.

Value Comparison of Innovative Assembly Character Toys, Block Kit Assembly Character Toys, Model Kit Assembly Character Toys and Non-assembly Character Toys

	Recreation of IP Characters *	Engagement **	Ease-of-play***	Cost Control****
Innovative Assembly Character Toys	◕	●	●	●
Block Kit Assembly Character Toys	◑	◕	●	●
Model Kit Assembly Character Toys	●	●	◕	◕
Non-assembly Character Toys	●	◑	●	◑

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Overview of Global Assembly Character Toy Market

** Refers to the degree to which the toy recreates the appearance, features, and essence of the IP characters*

*** Refers to the extent to which the toy can hold the attention and interest of the consumer*

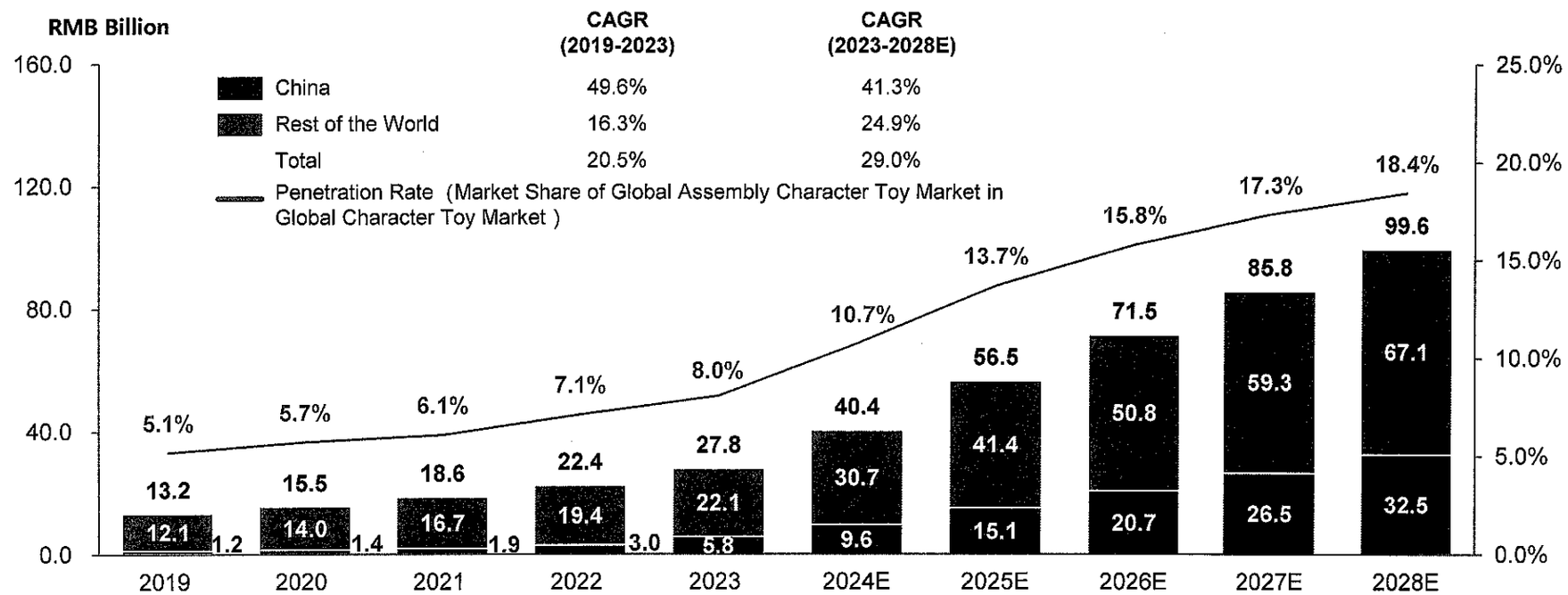
**** Refers to how easily a consumer, regardless of age or skill level, can play with or assemble the toy, if applicable, without the need for tools, or extensive prior knowledge or training*

***** Refers to a toy company's ability to control the toy manufacturing cost*

Analysis of Global Assembly Character Toy Market
Market Size of Global Assembly Character Toy Market

- The assembly character toy market is the fastest growing and highly promising segment in the global toy market. The global market size of assembly character toys grew at a CAGR of 20.5% from RMB13.2 billion in 2019 to RMB27.8 billion in 2023, with a penetration rate of 8.0% in the global character toy market. Assembly character toys combine the advantages of assembling mechanism and character toys, and their shares within the character toy market are expected to expand. The assembly character toy market is expected to grow at a CAGR of 29.0% from 2023 to 2028 to reach RMB99.6 billion in size with a penetration rate of 18.4% in the global toy market in 2028. In particular, China's assembly character toy market is expected to grow at a CAGR of 41.3% from RMB5.8 billion in 2023 to RMB32.5 billion in 2028. The penetration rate of global and China's assembly character toys in the character toy market is expected to increase from 8.0%and 14.3% in 2023 to 18.4% and 35.6% in 2028, respectively

Market Size and Penetration Rate of Assembly Character Toy Market in terms of GMV, Global, 2019 – 2028E

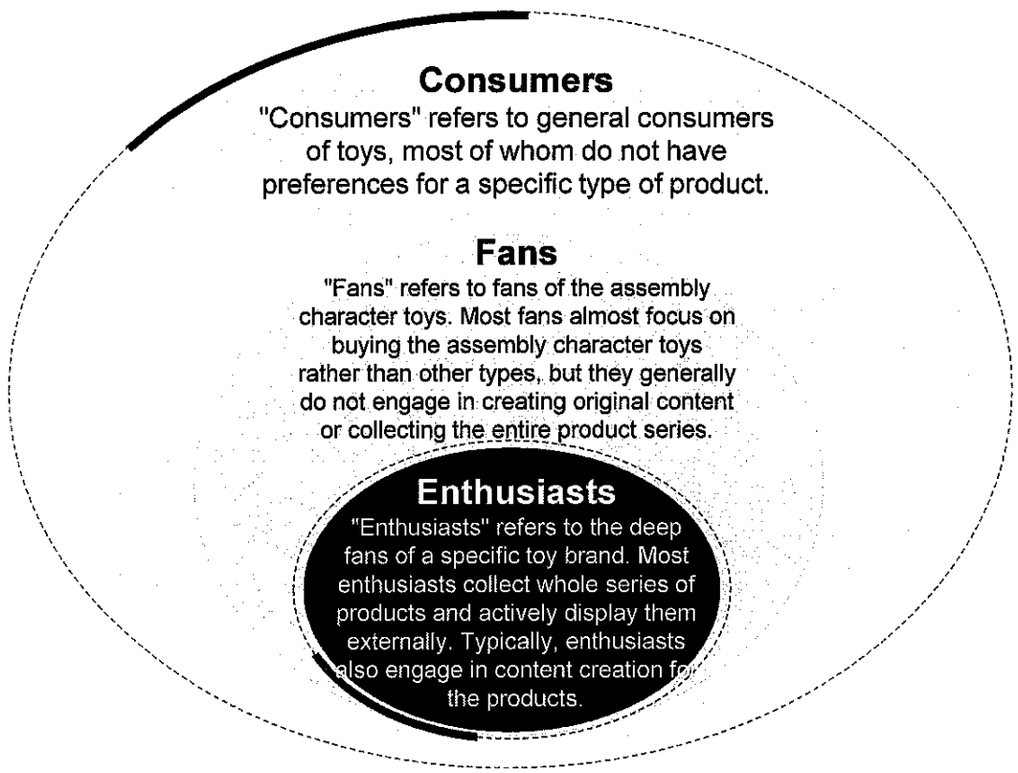


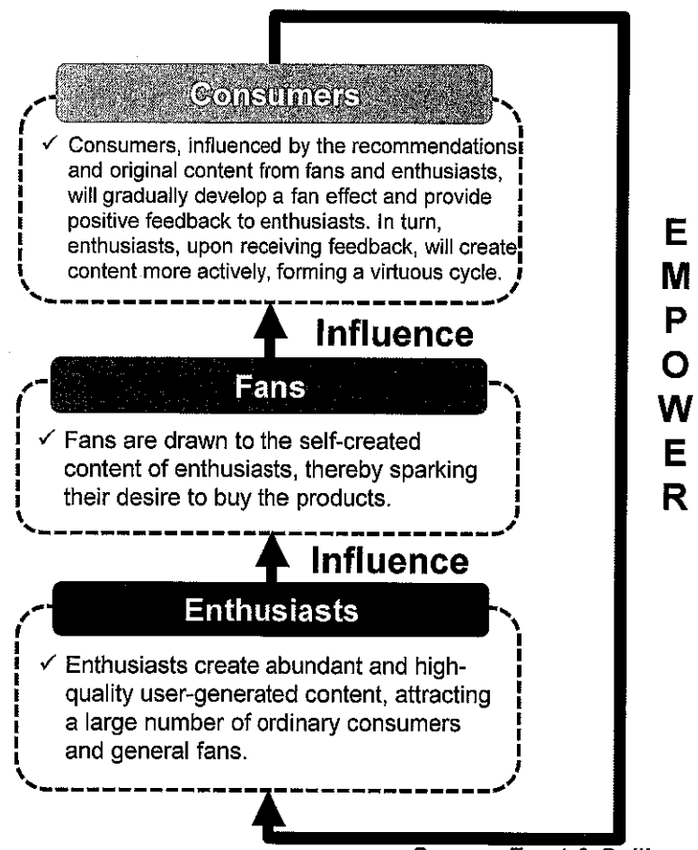
Source: Frost & Sullivan, International Monetary Fund(IMF), National Bureau of Statistics of China (NBS)

Analysis of Global Assembly Character Toy Market
Fans Ecosystem of Assembly Character Toys

- In the fans ecosystem of the assembly character toys, it generally consists of three groups of people: consumers, fans, and enthusiasts. A healthy fan ecosystem will present the "fan effects", leading to a virtuous cycle, continuously expanding the products influence.

Fans Ecosystem





Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Analysis of the Purchasing Decision Factors for Toys Consumption

Age Group	Age 0-6	Age 6-16	Age 16+
• **Safety:** Whether the toy is non-toxic and consists of sharp edges and corners	★★★*	★★	★
• **Entertainment Value:** Whether it attracts attention and provides a fun and playful experience	★★	★★★	★
• **Price and Quality:** Whether toys are affordable and high-quality enough	★★★	★★★	★★
• **IP Attributes:** Whether the toy has IP attributes	★★	★★★	★★★
• **Collectible Value:** Whether the toys have collectible and brand value of the toy, particularly for limited edition or commemorative products.	★	★★	★★★

*In the table, stars indicate the importance of factors determining purchase decisions, with three stars being the most important and decreasing in importance with fewer stars.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Key Growth Drivers for the Global Assembly Character Toy Market (1/2)

Drivers of Global Assembly Character Toy Market

Drivers	Description
Demand for High-quality Experiences and Individualized Products	➢ In the global context where the toy product categories continue to expand and the product quality improves, consumption based on experience and individuality has become the mainstream. Assembly character toys meet this consumer trend. On the one hand, the assembling mechanism is widely popular among different consumer groups because it meets consumers' need for fun products that involve creativity, imagination and spatial perception. Combined with character toys, assembling mechanism not only provides character toys greater interactivity, but also expands the category and extends the life cycle of toys. In addition, consumers are eager to achieve self-expression and establish an emotional connection with toys through the assembling process. The growing consumer demand for high-quality experiences and products with individuality elements is expected to drive the sustained growth of the assembly character toy market.
Expansion of the Consumer Base	➢ Assembly character toys offer a diverse range of features, including intellectually stimulating, parent-child bonding, entertaining and collectability, which can effectively meet the demands of toy consumers across all age groups, thus promoting the continuous expansion of the consumer base. The intellectually stimulating and parent-child bonding features of assembling mechanism have increasingly attracted families who used to buy brick-based toys and traditional character toys for children to switch to assembly character toys. In addition, there is a growing demand for entertaining and interactive products among young consumers, which can be satisfied by the features of assembly character toys. Due to the IP attributes and collectability of assembly character toys, adults with higher disposable incomes and stronger spending power are becoming an important group of consumers for assembly character toys. The diverse features of assembly character toys also meet the evolving preference of consumers as they grow older, and therefore have a longer user life cycle. With the global dissemination of various IPs based on movie, television and anime characters, the consumer base for assembly character toys has also expanded in various countries and regions around the world.
Value-for-money Consumption Trend	➢ Driven by the global trend of value-for-money consumption, consumers are becoming more sensitive to both price and quality of the products. As such, quality-for-money toys have a strong appeal and large market potential. With the emergence of great value-for-money products and the expansion of sales channels, consumers in lower-tier cities can also experience high-quality products, which in turn drives the consumption growth in these markets.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Key Growth Drivers for the Global Assembly Character Toy Market (2/2)

Drivers of Global Assembly Character Toy Market

Drivers	Description
Emergence of High-quality Supply	➢ Growing market demand for assembly character toys, which combine the advantages of assembling mechanism and character toys, has increasingly attracted high-quality supply into the segment. In particular, in recent years, innovative toy companies have emerged in the market besides block kits and model kits, further increasing the high-quality supply. Innovative toy companies have established factory systems specializing in the production of assembly character toys, achieving efficient output, consistent quality and industry-leading cost advantages to meet rapidly growing consumer demand. Leading industry players have spearheaded the industry progression and expanded the supply, forming a virtuous cycle and promoting the long-term development of the assembly character toy market.
Wide Application of IP	➢ With the consumers' increasing demand for cultural products, the expansion of IP categories and the diversification of IP creation and distribution, IP proprietors actively explore ways of expanding the influence and commercialization of their IPs beyond animes and movies. IP proprietors are increasingly attracted to the assembly character toy category that can efficiently commercialize the IPs with products covering wide demographics, price segments and global consumers. From toy companies' perspective, increasing use of renowned IPs in assembly character toys has elevated consumer awareness of the category and attracted purchases from more IP fans. Leading assembly character toy companies build a rich IP portfolio through self-developed and licensed IPs and launch diverse product offering based on the varying attributes of IPs matching different audiences, so as to better satisfy consumers' demand and drive the market development.
Distinctive Consumer Ecosystem for the Category	➢ Due to the interactive nature of the assembling process and the deep integration with IPs, assembly character toy category has a distinctive consumer ecosystem. Consumer's emotion and interests are crucial factors driving the consumption of assembly character toys. Assembling mechanism can stimulate the fans' and creators' creativity and desire to share their UGCs. Furthermore, renowned IP characters typically have loyal fan bases and can resonate with these fans. Based on the product theme and IP influence, fans and creators create and disseminate rich and high-quality UGCs, which drive consumer awareness and more purchases. The positive feedback from consumers on the UGCs from fans and creators further stimulates the enthusiasm for self-creation in the ecosystem, thus forming a virtuous cycle. The expansion of the ecosystem increases the loyalty and repeat purchases of consumers and fans.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Key Success Factors in the Global Assembly Character Toy Market (1/2)

1 Leading Innovation Capability

- An innovative system to address existing issues in the character toy industry is the key for industry player to succeed in the market. The core of system innovation lies in an industry player's ability to build on the strengths of the industry and elevate further. An innovative system should not only achieve a high degree of standardization to balance quality and cost, but also provide consumers with individualized way of playing and interactive experience, so that the products can reach a wide range of consumers across different age groups, genders and spending powers. Only the leading industry players that have built an innovative system that effectively combines standardization and individuality elements are capable of offering global leading assembly character toys to satisfy the widespread consumer demand for high-quality experiences and recreation of the essence and distinctive charm of IP characters.

2 Extensive Patent Portfolio

- Extensive patent portfolio is essential for establishing an innovative system and protecting the originality of assembly character toys. An extensive patent portfolio also creates barriers for other industry players to replicate the system. In addition, patents related to technology and production techniques enable the leading industry players to establish a factory system specializing in the production of assembly character toys to achieve large-scale and efficient production of assembly character toys, better control the product quality and improve consumer experience.

3 Diverse IP Portfolio

- The high recognition, rich content and extensive fan base associated with IPs enhance the competitiveness of toy products. Industry players can satisfy the diverse demands of consumers and fans and reach global consumers across different age groups through in-house IP development and extensive cooperation with proprietors of renowned IPs. However, developing IPs requires the accumulation of long-term consumer insights and excellent development capabilities, which many industry players do not possess. In addition, the requirements for licensing renowned IPs are generally high, which typically involves the partner having a systematic IP operation system and leading IP commercialization and management capabilities. Meanwhile, renowned IPs are usually only licensed to a handful of toy companies in specific product categories and regions. Therefore, it is difficult for most industry players to develop their own IPs or obtain a wide range of IP licenses. A few leading industry players have established competitive advantages through a rich IP portfolio comprising self-developed IPs and renowned IPs licensed from their proprietors.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Key Success Factors in the Global Assembly Character Toy Market (2/2)

1 Product Strength

- Excellent product strength is one of the key elements that determine whether an industry player can stand out in the assembly character toy market. Product strength is mainly reflected in the quality and pricing, the product launch and the IP's product life cycle. First of all, quality-for-money toys satisfy the widespread demand of global consumers, and an industry player will only be competitive if the products enjoy high qualities such as safety, endurability, exquisite design and consistent experience while providing value-for-money. Secondly, consumer preference is constantly and rapidly evolving, so industry players need to launch new products frequently and take into account the number of new products and the success rates in order to gain a competitive edge. Thirdly, extending the IP's product life cycle is crucial for the sustained growth of industry players. Successful industry players can continue to launch new products based on each individual IP while extending such IP's product life cycle through continuous iterations.

2 High Efficiency, Large-scale Production and Cost Advantages

- The efficiency, economies of scale and cost advantages of the production largely determine whether an industry player can fully meet the consumer need for quality-for-money products. By effectively exploring and customizing high-quality and cost-effective production resources, leading industry players systematically manage the production of assembly character toys, so as to create a technically advanced production system to strengthen the differentiated advantages on the production end. In addition, a highly standardized system covering design, research and development and production enables leading industry players to improve the scale and efficiency of product launch, the consistency of product quality, and cost advantages.

3 Excellent Marketing Capabilities

- Assembly character toys are naturally suitable for content-driven marketing due to the consumer interactivity and emotional connection from the assembling process, and the fact that IP characters are closely associated with rich contents that can be widely disseminated. Effective marketing methods can efficiently reach and maintain a broad base of consumers and fans, promote the formation of a consumer ecosystem, and increase the stickiness and repeat purchases of consumers and fans. Therefore, leading industry players fully leverage the popularity and influence of IPs, utilizing multiple communication channels (such as official accounts and accounts of KOLs, KOCs and fans) on social media platforms to systematically disseminate product related contents. This enhances brand recognition and consumer awareness of products, improves efficiency for promotion and product launch success rates, and generates synergies and network effects across different sales channels.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market

Policies and Regulations Relevant to China's Assembly Character Toy Market (1/4)

Policies and Regulation of Assembly Character Toy Market, China: Product Safety & Sustainability

Policies and Regulations	Issued Date	Issued Department	Main Content and Emphasis
Further Strengthening the Management of Excessive Packaging of Goods 《进一步加强商品过度包装治理》	2022.9.1	The State Council 国务院	➢ For fields such as **toys** and infant products, electronics, etc., develop and implement recommended national standards for minimalist packaging and restricting excessive packaging, clarify the criteria for determining excessive packaging, and guide towards reduced packaging. ➢ For key emerging contaminants subject to content control, the requirements for content control will be incorporated into the mandatory national standards for relevant products such as **toys** and student supplies, with strict supervision and implementation enforced. ➢ This strictly regulates the standards for **the use of plastic materials in the toy industry**, which is beneficial for **ensuring product safety while reducing pollution**. ➢ Strengthen the supervision of products within the CCC certification catalog; enhance the recall management of key products such as children's products, electronics, and electrical appliances, and improve the technical support system for defective product recalls. ➢ Efforts will be further intensified to strengthen industry certification for toy products and standardize the production and manufacturing of the toy industry. ➢ Strengthen product quality and safety supervision; establish and improve mandatory national standards for **children's toys**, and enhance the self-discipline of the children's products industry; implement mandatory product certification management for some children's products according to law. ➢ Further improve the **quality and safety** supervision of the **toy industry** to better protect children's health.
New Pollutant Control Action Plan 《新污染物治理行动方案》	2022.5.4	The State Council 国务院	
The 14th Five-Year Plan for the Modernization of Market Supervision 《"十四五"市场监管现代化规划》	2021.12.14	The State Council 国务院	
China Children's Development Outline (2021-2030) 《中国儿童发展纲要（2021—2030年）》	2021.9.8	The State Council 国务院	

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market

Policies and Regulations Relevant to China's Assembly Character Toy Market (2/4)

Policies and Regulation of Assembly Character Toy Market, China: Industry Innovation & Cultural Export

Policies and Regulations	Issued Date	Issued Department	Main Content and Emphasis
Classification and Management Catalogue of Environmental Impact Assessment for Construction Projects (2021 Edition) 《轻工业稳增长工作方案（2023—2024年）》	2023.7.19	Ministry of Industry and Information Technology, etc. 工业和信息化部等	➢ For light industries, such as plastic products, including the raw materials for building blocks, this serves a guiding role, providing policy support and corresponding protective measures for the healthy, stable development of such industries. ➢ Suggests to organize **creative design contests** for toys and infant and toddler products, aiming to promote the new national trend, museum, and cultural tourism IP brand authorizations. ➢ Offers guidance for the entire industrial chain development of the character toy industry, conducive to its healthy, rapid growth.
Outline of the Strategic Plan for Expanding Domestic Demand (2022-2035) 《扩大内需战略规划纲要（2022-2035年）》	2022.12.14	The State Council 国务院	➢ Improve the modern cultural industry system and the cultural market system, develop various types of cultural and creative products, and expand the supply of high-quality cultural products and services.
Promoting High-Quality Development of Foreign Cultural Trade 《推进对外文化贸易高质量发展》	2022.7.18	Ministry of Commerce, etc. 商务部等	➢ Deepen the reform of approval processes in the cultural sector. Focus on promoting the development of cultural media, online games, animation, creative design, and other fields by initiating pilot reforms to optimize approval procedures.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market

Policies and Regulations Relevant to China's Assembly Character Toy Market (3/4)

Policies and Regulation of Assembly Character Toy Market, China: Industry Innovation & Cultural Export

Policies and Regulations	Issued Date	Issued Department	Main Content and Emphasis
Digitalization Aids the Consumer Goods Industry 'Three Products' Action Plan (2022-2025) 《数字化助力消费品工业"三品"行动方案(2022-2025年)》	2022.6.30	Ministry of Industry and Information Technology, etc. 工业和信息化部等	➢ Continuously promote the construction of industrial design centers and creative design clusters in the consumer goods sector, gathering industry R&D and design resources to enhance the digital design level of the industry. ➢ Accelerate the integrated development of product design, cultural creativity, technological innovation, and brand building, effectively incorporating Chinese cultural elements into Chinese brands, deeply capturing the cultural value of brands, and exploring the evaluation of corporate brand value.
Guidance on Promoting High-Quality Development of Light Industry 《关于推动轻工业高质量发展的指导意见》	2022.6.8	Ministry of Industry and Information Technology, etc. 工业和信息化部等	➢ Cultivate a group of internationally renowned brands in the fields of household appliances, hardware products, clocks and watches, furniture, etc. (including **high-safety toys and infant and toddler products**); support industries such as household appliances, furniture, leather, hardware products **toys**, and infant and toddler products in **design innovation**.
Special Action Plan for Enhancing Manufacturing Design Capability (2019-2022) 《制造业设计能力提升专项行动计划(2019-2022年)》	2019.10.11	Ministry of Industry and Information Technology, etc. 工业和信息化部等	➢ Achieve **design upgrades** in traditional industries with competitive advantages. In the consumer goods sector, support design innovation in smart ecological clothing, household textiles, industrial textiles, footwear products, **toy appliances**, furniture, etc.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market

Policies and Regulations Relevant to China's Assembly Character Toy Market (4/4)

Policies and Regulation of Assembly Character Toy Market, China: Intellectual Property Protection

Policies and Regulations	Issued Date	Issued Department	Main Content and Emphasis
Opinions on Strengthening the Protection of Intellectual Property Rights 《关于强化知识产权保护的意见》	2019.11.24	The State Council 国务院	➢ Focus on improving the quality of utility model and design patent examination, promote e-commerce platforms to establish an effective use of patent evaluation reports, and quickly handle complaints of infringement on utility model and design patents. ➢ This is beneficial for protecting the intellectual property rights of toy companies and IP holders, and encouraging enterprise innovation.

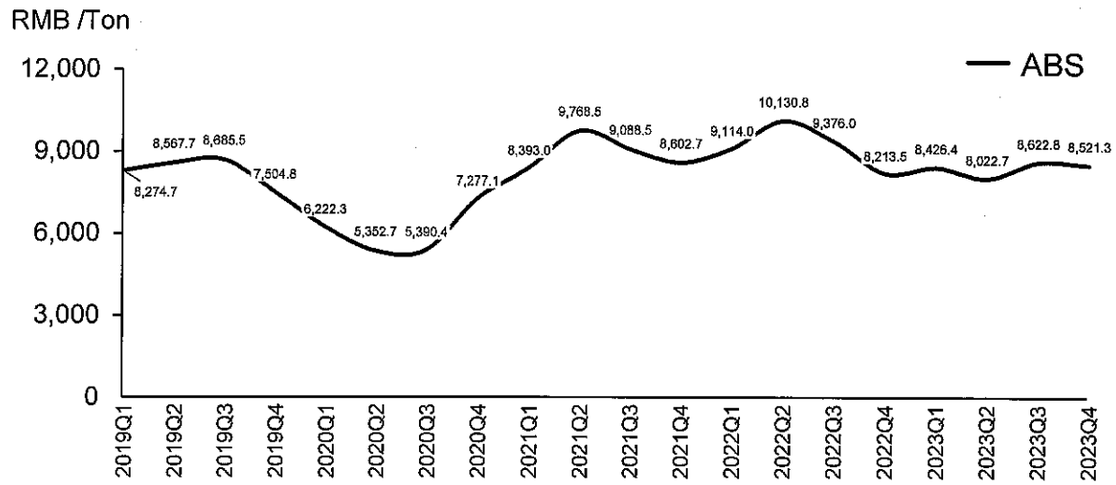
Policies and Regulation of Assembly Character Toy Market, China: International Exchange & Cooperation

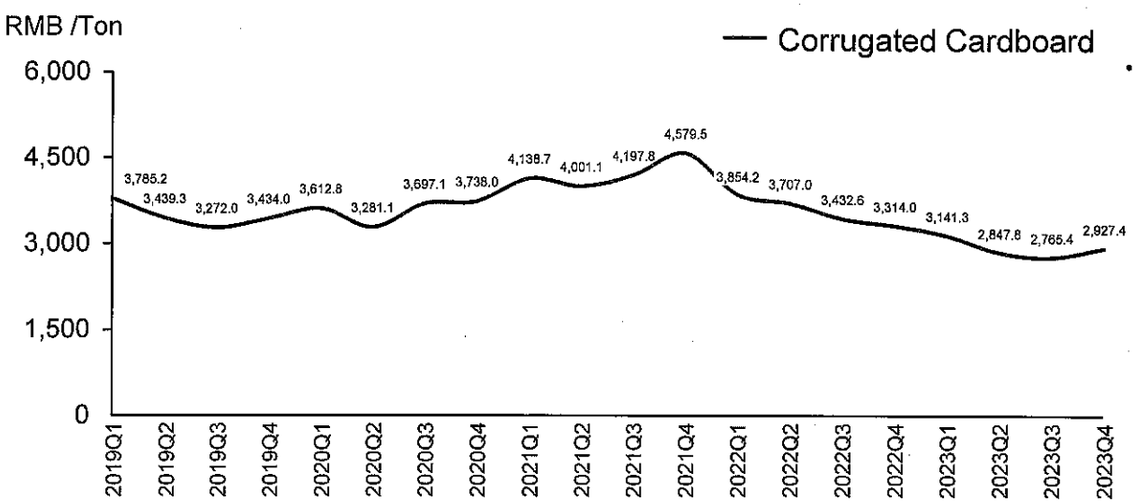
Policies and Regulations	Issued Date	Issued Department	Main Content and Emphasis
Several Policy Measures to Support the Stable Development of Foreign Trade 《支持外贸稳定发展若干政策措施》	2022.9.27	Ministry of Commerce 商务部	➢ Specific measures to support the stable development of foreign trade were proposed from three aspects: (enhance the ability to fulfill foreign trade contracts and further explore international markets; stimulate innovation and support stable foreign trade; strengthen the capacity for protection and promote smooth trade). ➢ The robust support for foreign trade, along with the guarantees provided for related industries, offers support for Chinese character toy enterprises to explore overseas international markets and expand the consumer market.
Regulating Across Cycles to Further Stabilize Foreign Trade 《做好跨圈期调节进一步稳外贸》	2022.1.11	The State Council 国务院	➢ For export enterprises of labor-intensive products such as textiles, garments, furniture, shoes, plastic products, bags, toys, stone, ceramics, and advantageous specialty agricultural products, localities should effectively implement policies and measures for reducing burdens, stabilizing positions, and expanding employment in ways that comply with WTO rules, and increase policy support for export credit and export credit insurance.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Analysis of the Main Cost Elements (1/2)

Production Costs: Average Prices of Major Raw Materials, China, 2019Q1-2023Q4



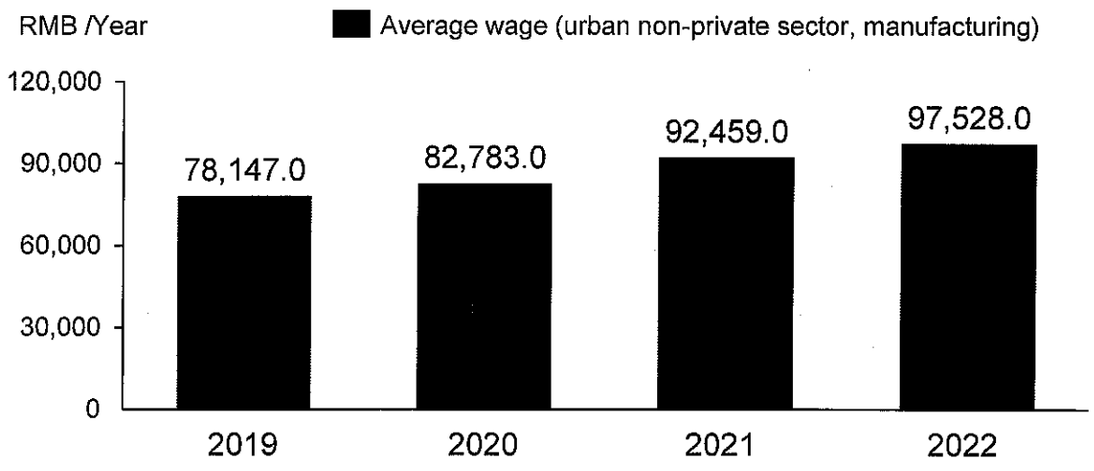


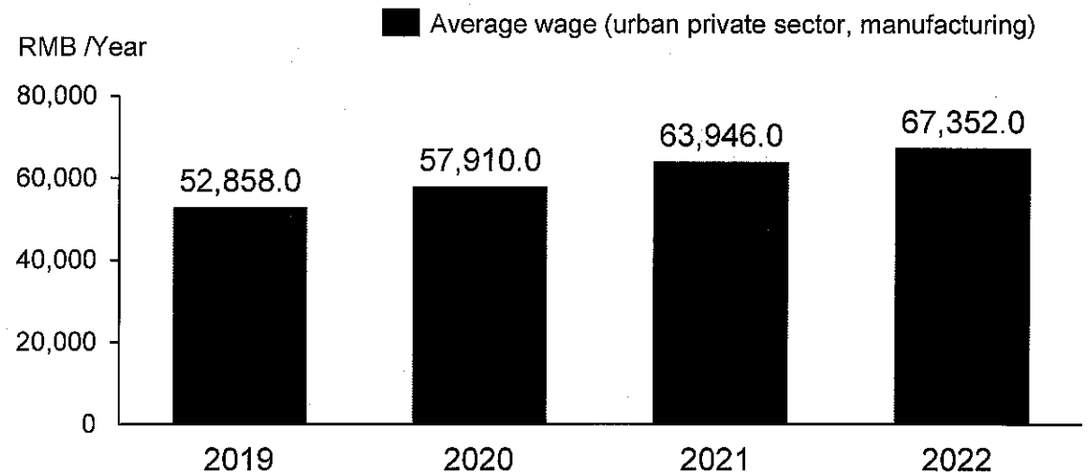
- The key raw materials for manufacturing assembly character toys are primarily including ABS (Acrylonitrile Butadiene Styrene) and corrugated cardboard.
- Over the past five years, the price of ABS in China has generally shown a fluctuating trend. This is mainly due to the significant drop in demand for ABS from major consumers such as the toy industry during the second half of 2019 and the first half of 2020, influenced by the outbreak of the COVID-19 pandemic, which led to a sharp decline in ABS prices, reaching a lowest level in recently five years of RMB54,000 per ton. However, as the impact of the pandemic gradually diminished, prices began to rebound rapidly from the second quarter of 2020, peaking in the first half of 2022 at RMB101,000 per ton, nearly double the lowest price in the second half of 2020. Subsequently, by 2023, ABS prices stabilized, maintaining between RMB80,000 per ton and RMB85,000 per ton.
- In terms of corrugated cardboard prices in China, there was a stable upward trend from 2019 to 2021, rising from RMB3,800 per ton to RMB4,600 per ton. However, in 2022, corrugated cardboard prices started to decline. By the fourth quarter of 2023, corrugated cardboard prices had dropped to RMB2,800 per ton, marking the lowest level in five years. This phenomenon is mainly due to trends on both the demand and cost sides. On the demand side, the overall market demand for corrugated cardboard was lower than expected, presenting a market trend of oversupply. On the cost side, the price of waste paper, the main raw material for corrugated cardboard, has been continuously declining in recent years.

Source: Frost & Sullivan

Analysis of Global Assembly Character Toy Market
Analysis of the Main Cost Elements (2/2)

Production Costs: Labor Cost, China, 2019-2022





- For non-private manufacturing sector, there has been a consistent increase in the average wages from 78,147 in 2019 to 97,528 RMB /year in 2022 with a CAGR of 7.7%.Similarly, the average wages in the private sector have increased from 52,858 in 2019 to 67,352 RMB /year in 2022 with a CAGR of 8.4%. The increase in average wages suggests a rising cost of labor in the character toys sector, which would directly impact the production costs of toy manufacturing companies.

- To mitigate the impact of rising labor costs, toy manufacturers may invest more in automation and other technologies that can enhance productivity and reduce reliance on manual labor.

- Besides raw materials and labor costs, manufacturing and quality control costs will also affect production costs. With increasing consumer demands for toy quality and safety, manufacturers have intensified their investment in quality control during the production process, directly leading to an increase in production costs.

Source: Frost & Sullivan

3. Competitive Landscape Analysis

Competitive Landscape Analysis

Analysis of Major Players' Ranking and Market Share

- In the global assembly character toy market, the Group is the third largest assembly character toy company in the world in terms of GMV in 2023 and the first company in the world to dedicate to the development and sales of assembly character toys. Leading industry players in the assembly character toy market besides the Group are mainly multinational companies that are well known in the toy industry. The global assembly character toy market is highly concentrated, with the top five players accounting for 87.1% of the total market share in terms of GMV in 2023, and two renowned multinational toy companies holding a large market share.

Ranking of Assembly Character Toy Industry Players by GMV, Global, 2023

Rank	Company Name	Main Business	GMV (RMB Billion)	Market Share
1	Company A	Games, toys, IP production, etc.	11.0	39.5%
2	Company B	Brick toys	10.0	35.9%
3	**The Group**	**Mainly assembly character toys**	**1.8**	**6.3%**
4	Company C	Dolls, vehicles, preschool, etc.	0.9	3.2%
5	Company D	Assembly toys	0.6	2.2%
	Total		**27.9**	**100%**

Note:
1. Company A is a publicly listed multinational entertainment company and toy supplier headquartered in Tokyo, Japan.
2. Company B is a privately held multinational toy company headquartered in Billund, Denmark.
3. Company C is public global toy and family entertainment company headquartered in El Segundo, United States.
4. Company D is a privately held assembly toy company headquartered in Shantou, China.
5. GMV only includes the retail sales generated from the sale of assembly character toys.

Source: Frost & Sullivan

Competitive Landscape Analysis
Analysis of Major Players' Ranking and Market Share

- In terms of GMV in 2023, China's assembly character toy market is highly concentrated, with the top five market players accounted for a total market share of 76.8%. The Group, as the largest player in the assembly character toy market in China, has a market share of 30.3%.
- The content-driven online marketing strategy of the Group proves highly effective. In 2023 and the three months ended March 31, 2024, the marketing and promotion expenses amounted to RMB73.7 million and RMB20.5 million, respectively, accounted for 8.4% and 4.4% of its revenue for the respective period, lower than the industry.
- Moreover, the distributorship business model enables the Group to rapidly expand the breadth and depth of its presence and drive our sales growth. The existing distribution model is consistent with the industry practice in China and overseas markets and serves to ensure the extensive coverage of its sales network while controlling its costs of distribution.

Ranking of Assembly Character Toy Industry Players by GMV, Global, 2023

Rank	Company Name	Main Business	GMV (RMB Billion)	Market Share
1	**The Group**	**Mainly assembly character toys**	**1.7**	**30.3%**
2	Company A	Games, toys, IP production, etc.	1.2	20.0%
3	Company B	Brick toys	0.9	14.8%
4	Company D	Assembly toys	0.6	10.4%
5	Company E	IP toys	0.1	1.4%
	Total		**5.6**	**100%**

Note:
1. Company E is an IP toy company headquartered in Guangzhou, China, and is a subsidiary of a public chain retail company.
2. GMV only includes the retail sales generated from assembly character toys sold through official channels in China.

Source: Frost & Sullivan

Competitive Landscape Analysis
Analysis of Major Players' Ranking and Market Share

- The Company was the fastest growing large-scale toy company in terms of GMV growth rate in 2023.
- In terms of the number of IPs owned, the Company holds a leading position among the global buildable character toy companies.
- The Company is the top-ranked Chinese building block toy enterprise in terms of the number of patents in the buildable character toy category.
- The vehicle toy segment is the second largest toy segment by form in the global toy market, with a GMV of RMB96.7 billion and a penetration rate of 12.5% in the global toy market in 2023.
- The Company is China's largest and leading player in the assembly character toy segment with a GMV of approximately RMB1.8 billion in 2023.
- In the three months ended March 31, 2024, our marketing and promotion expenses amounted to RMB20.5 million, accounting for 4.4% of the Company's total revenue, significantly lower than the industry average.
- The Company's existing distribution model is consistent with the industry practice and serves to ensure the extensive coverage of the Company's sales network while controlling the Company's costs of distribution.
- Once the products are delivered to and accepted by the Company's distributors, they cannot be returned except for product defects, which is in line with the market practice.
- The Company's our fee arrangements with IP proprietors or licensors are in line with industry standards.
- In the six months ended June 30, 2024, the Company recorded a gross profit margin of 53.3%, which is above industry average.
- The Company have achieved a molding accuracy of 0.004 mm, significantly higher than the industry average.
- In terms of the product launch cycle, it takes approximately six to seven months from conceptualization to mass production, which is lower than the industry average of 10 to 12 months.
- In the three months ended March 31, 2024, our marketing and promotion expenses accounted for 4.4% of our total revenue, significantly lower than the industry average.
- The Company integrate our know-how in assembly character toy production, self-developed unique production techniques and various patents to curate industry-leading proprietary production techniques and customized equipment to be applied in a network of toy factories dedicated to the production of our products.
- According to the National Bureau of Statistics, there are 4 first-tier cities, 31 second-tier cities, and 332 third-tier and lower cities in China.
- Alternatively, according to China Business Network, there are 4 first-tier cities, 45 second-tier cities, and 318 third-tier and lower cities in China.
- The animation production industry in China is relatively mature with ample qualified suppliers.

Source: Frost & Sullivan

Competitive Landscape Analysis
Analysis of Major Players' Ranking and Market Share

- The Company had established an industry-leading position in offline sales channels in China, including retail outlets and specialty outlets
- The Company has industry-leading IP development capabilities and have widely disseminated our self-developed IP contents
- Through the integration of patents and IP in the entire process of product design, research and development and production, we are able to achieve industry-leading balance between product quality and cost control
- The Company follow a strict standard to select and manage our production partners, and establish long-term category exclusive cooperation with industry-leading third-party partner factories
- Assembly character toy is the fastest-growing segment in the global toy market and has significant growth potential.
- Due to the emergence of innovative systems and quality supply, assembly character toys enjoy significant differentiated advantages over traditional character toys, gradually becoming the preferred choices of consumers, with the penetration rate in the global toy market is expected to increase in the long run. Furthermore, the innovative systems can be applied to multiple categories of toys, including vehicle toys and various scenery toys.
- The ability to curate a product offering that captures all demographics, all price segments and global consumers is essential for toy companies to achieve sustainable long-term growth
- The top two industry players in the global assembly character toy market are multinational companies that are well-known in the toy industry, the combined market share of which was approximately 75.4% in 2023
- With the success of the IP licensing business model in the toy industry, IP-licensed toys have become an important business segment for many toy companies, which also use a large number of IP licenses to expand their business territories, such as LEGO, Hasbro, Bandai, Miniso,, etc. The common practice for IP licensing cooperation is for the IP owner to grant licenses to partners primarily for 1-3 years at a time. Continuous licensing is an important commercial approach for IP owners to seek reasonable returns on intellectual property investments, continually expand the influence of the IP, and extend its lifecycle. Additionally, changing an existing IP licensing partner can disrupt the established arrangements of the IP owner and require significant resources to find a suitable replacement partner that matches in terms of industry status, research and development capabilities, reputation, corporate image, and development strategy, resulting in high replacement costs. Therefore, IP owners typically choose to renew contracts with existing partners to maximize benefits. As a result, many toy companies have engaged in long-term cooperation and multiple renewals with IP owners. For example, Hasbro has cooperated with Disney's Marvel IP for nearly 20 years and with the Star Wars IP for over 20 years. LEGO has collaborated with the Star Wars and Harry Potter IPs for nearly 20 years, and Miniso has partnered with Disney's IPs for nearly 10 years.

Source: Frost & Sullivan

Competitive Landscape Analysis
Analysis of Major Players' Ranking and Market Share

- Some of the Company's products were in the form of blind boxes, which is a popular form in the toy industry
- The common practice for IP licensing involves the IP proprietors or licensors granting licenses to partners for one to three years at a time on average, with continuous authorization achieved through renewals.
- The Company's measures and internal policies for blind boxes are in line with the industry norm
- The Company's existing distribution model is consistent with the industry practice
- The Company's practices in relation to rebates are in line with industry practices.
- The specifications of our products, including the size of the blocks and components, are in line with the aforementioned applicable domestic and global quality standards
- The Company typically do not provide credit terms to our distributors, and will require them to make the payment before the shipment of the products ordered. However, for certain credit-worthy distributors, we may grant them a credit term typically between one to three months. Such credit policy is in line with the industry norm
- On the IP licensing front, assembly character toys are considered a high-quality medium for IP proprietors to expand consumer reach and maintain consumer loyalty. More specifically assembly character toys, due to their connection with consumers and their collectability, have become an ideal medium for the storyline and values of a particular IP franchise
- As of June 30, 2024, the Company had established a strong market position in offline sales channels in China, including retail outlets and specialty outlets.
- The Company had a total of more than 13 million fans on online platforms including JD.com, Weixin, Tmall, Douyin, Pinduoduo, Kuaishou.Weibo, Xiaohongshu and Bilibili as of the Latest Practicable Date, ranking as one of the top two brands in the Chinese toy industry in this regard.

Source: Frost & Sullivan

Competitive Landscape Analysis
Entry Barriers

Brand Licensing Requirements

- Entry into the assembly character toy market often requires securing licenses from popular franchises or intellectual properties (IPs). These licenses can be expensive and difficult to obtain, as they are typically controlled by established entertainment companies with stringent licensing criteria.

High Development Costs

- Developing assembly character toys involves significant upfront investment in research, design, and manufacturing. The need to accurately replicate characters and settings from licensed IPs increases development costs, making it challenging for new entrants without sufficient financial resources.

Entry Barriers

1

2

3

4

Competition from Established Brands

- Established brands in the assembly character toy market, such as LEGO, have strong brand recognition and loyal customer bases. New entrants face intense competition from these established consumers, who may have superior marketing, distribution, and production capabilities.

Complex Supply Chain Management

- Assembly character toys require intricate supply chain management to ensure timely sourcing of materials, efficient manufacturing processes, and effective distribution channels. New entrants may struggle to establish robust supply chain networks and partnerships, which can hinder their ability to compete effectively in the market.

Source: Frost & Sullivan

Thank You

Partner with you on the Road to Growth