

## Sony Group Corporation (6758 JP) Japanese entertainment company with a PlayStation 5 kicker



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## Summary





- 1. Sony is a Japanese diversified entertainment company with six separate business areas: video games, movie production, music, image sensors, consumer electronics and financial. It has a storied history in the global consumer electronics industry, inventing the first truly portable cassette player "Sony Walkman", as well as the Sony Discman and the video game console Sony PlayStation.
- 2. The PlayStation business is stronger than ever, with the latest console released in late 2020. Due to problems with component shortages, supply has been constrained and sales has therefore underwhelmed. But lately, Sony's management team is guiding for a ramp-up in sales, which will benefit console sales and associated game software, which has a high contribution margin.
- 3. The Sony Pictures movie production segment has done an incredible turnaround since 2017 thanks to its CEO Anthony Vinciquerra, which has sought to better utilise Sony's intellectual property. Other than profitable distribution deals with Netflix and Disney+, Vinciquerra has also managed to achieve several recent blockbusters, despite weak cinema attendance during COVID-19.
- 4. The music segment is similarly benefitting from the rise of streaming, and the world's three major record labels Universal, Warner and Sony are all benefitting in a similar fashion. Growth is likely to continue for the foreseeable future.
- 5. Sony's image sensor segment is the clear market leader, with a close to 50% market share and the sole supplier of image sensors to Apple's iPhone line-up of smartphones. Sony suffered from the loss of Huawei as a customer in 2020 but management has recently become more optimistic.
- 6. Lastly, Sony's consumer products and financial segments are the laggards. Sony's smartphones do not fare well given the competition and the financial segment is targeting no more than an 8% ROE.
- 7. The threat to Sony is Microsoft's apparent willingness to subsidise its Xbox business to Sony's detriment. It's possible that Apple will one day diversify its image sensor supplier base away from Sony, though no signs of it so far. It's also a question of whether music and movie spending has been artificially boosted by venture capital funding and whether the spending spree might slow down now that the US venture capital industry is doing worse than before.
- 8. But with the PlayStation 5 still early in its console cycle, earnings are likely accelerate in the coming 2-3 years as gamers start buying digital games on the platform. Using conservative assumptions yields a P/E ratio of 11x by 2026.

## Capitalisation



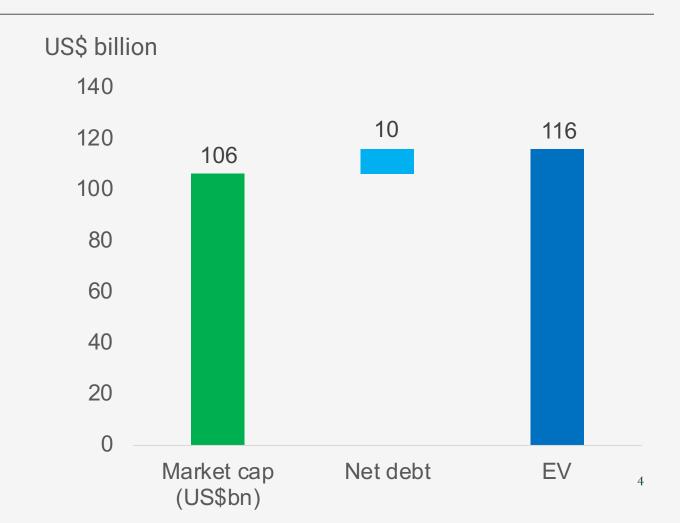
Share price: JPY 11,390

Shares outstanding: 1,261 million

Market cap: US\$106.4 billion

Net debt: US\$9.6 billion

Enterprise value: US\$116.0 billion



<sup>\*</sup> JPY = Japanese Yen. JPY/US\$ = 135.0

### Business overview



- Sony is a Japanese entertainment company with a diversified portfolio of businesses. It controls the most successful video game console globally, Sony Playstation with 109 million active users as well as major record labels and movie studios.
- Other than entertainment, Sony also sells consumer electronics such as TVs, smartphones, cameras and also image sensors used in high-profile smartphones such as Apple's iPhones.
- After a period of decline under Howard Stringer's leadership, Sony has been reinvigorated under CEO Kazuo Hirai between 2012-2019 and under current CEO Kenichiro Yoshida since 2019.
- All segments are now profitable, and the Sony PlayStation franchise is being monetized through subscription services and high-margin digital downloads. Sony PlayStation is now probably the larger retailer of video games on earth when you include in-app spending.





## Sony's contributed to the birth of the modern consumer electronics industry



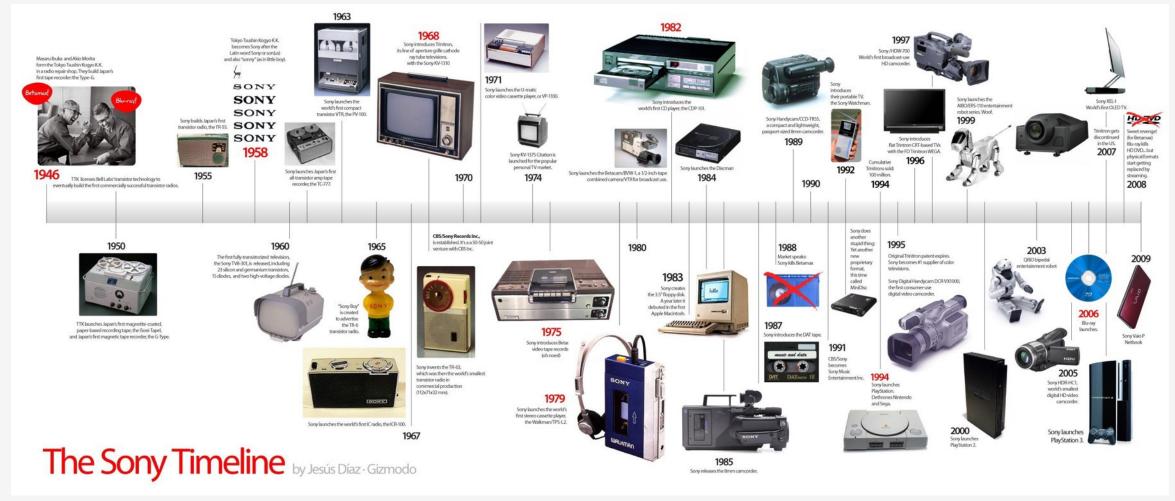
- Sony was founded in **1946** as "Tokyo Telecommunications Engineering Corporation" (Tokyo Tsushin Kogyo) by senior engineer *Masaru Ibuka* and a young brash entrepreneur called *Akio Morita*. It later changed its name to "Sony" so that the company's products would become more marketable overseas.
- One of Sony's first products was Japan's first tape recorder, inspired by an American tape recorder Morita had seen used by US occupation forces in Japan. In the late **1950s** and **60s**, Sony moved on to producing portable transistor radios and then became a major seller of televisions in the 1960s.
- In 1979, Akio Morita came up with the Sony Walkman, which became the first portable cassette player and enjoyed great success worldwide with over 400 million devices sold.
- Sony was also involved in the birth of the CD industry, producing the world's first CD player and the portable Discman.
- Sony then entered into movie and record production via the acquisitions of CBS Records and Columbia Pictures in 1988-89.
- The Playstation gaming in the early **1990s** became a major hit as third-party developers flocked to Sony.
- Sony lost market share during the Howard Stringer years from 2005 onwards and lost in innovation power.
- CEO Kazuo Hirai took over in 2012 and Sony's profitability then improved gradually. Sony then introduced three-year mid-range plans with ambitious goals for each. It sold off its VAIO PC division in 2014. It sold its stake in game developer Square Enix. And in 2015, Sony made a major coup buying Toshiba's image sensor business for a low price. And also sold Sony's capital intensive lithium-ion battery business. But the major improvement in profitability came from Sony's Playstation's move towards digital games.
- Current CEO Kenichiro Yoshida took over in 2019, and he continuing the Kazuo Hirai legacy of cost-control and monetization of Sony's current assets.





## Sony's most famous products: the Sony Walkman, floppy disks, the Betamax, the CD player, the Handycam, PlayStation, Trinitron TV





Source: Gizmodo

### An overview of Sony's current portfolio of businesses



## SONY

### Entertainment

- Video games
- Movies
- Music







### **Electronics**

- Image sensors
- Consumer electronics: TVs, cameras, smartphones









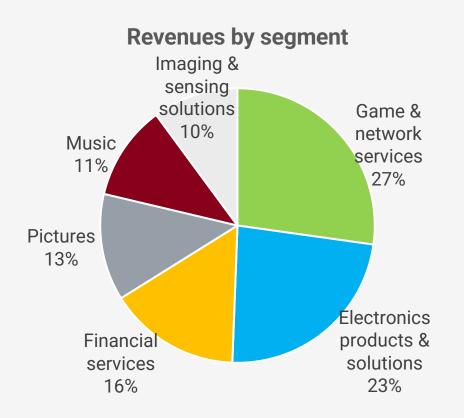
### Financial services

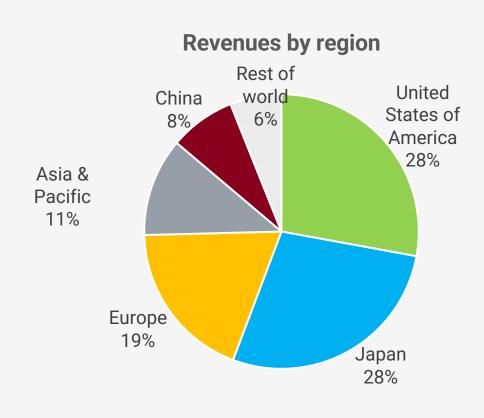
- Whole Life Insurance
- Sony online bank



## Sony makes money across video games, consumer electronics, movies and music across US, Japan and Europe





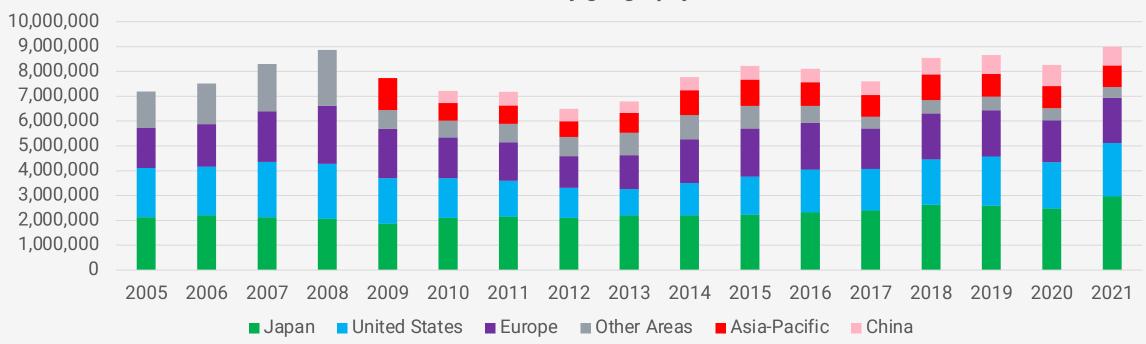


Source: TIKR

## Most of Sony's growth has come from overseas



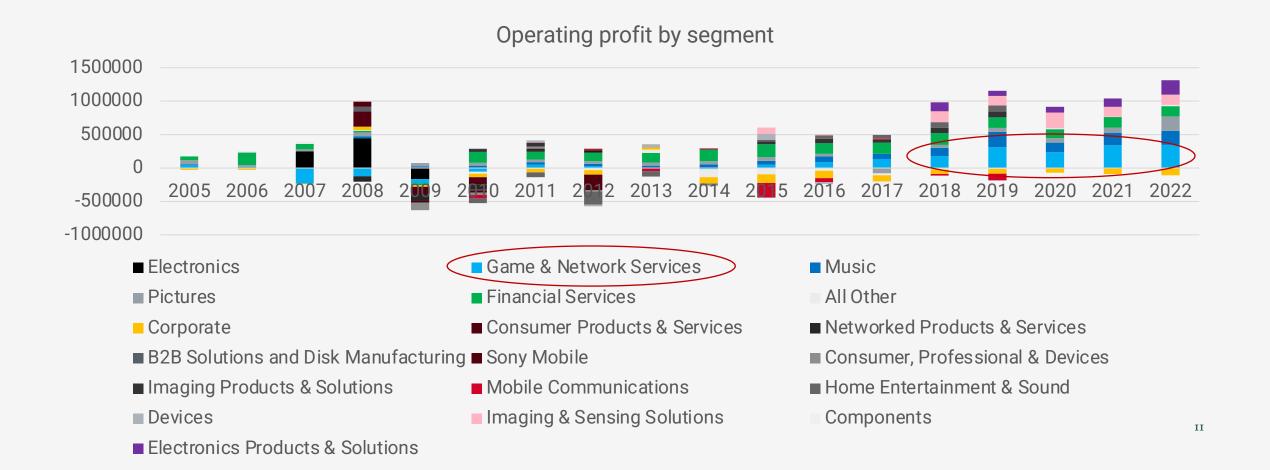




Source: TIKR

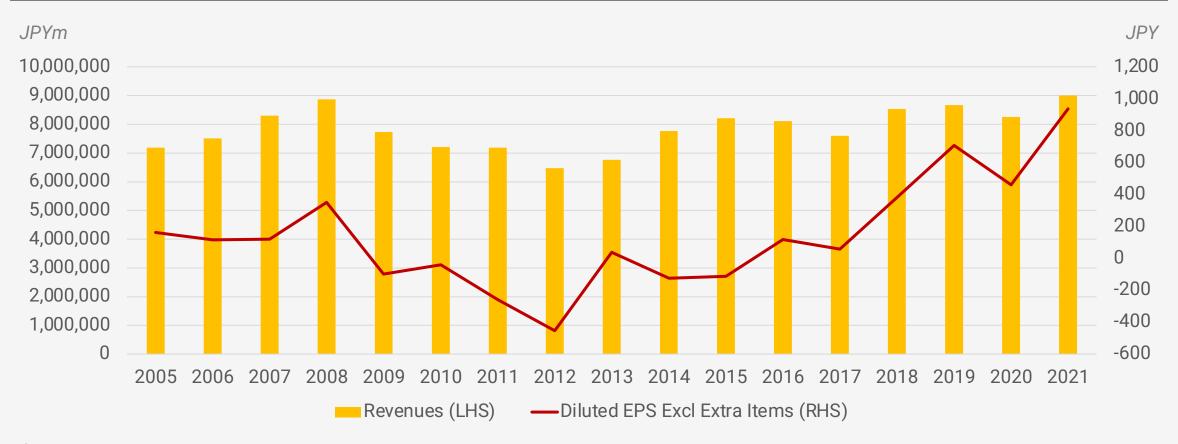
# And in terms of segments, most profit growth has come from "game & network services" – i.e. the Playstation segment





## Sony has long had stagnant revenue growth but rising margins thanks to its PlayStation franchise





Source: TIKR

### 1. The Playstation segment ("Game & network services")



- Sony's Playstation 5 is the global leader in video game consoles globally with about 110 million monthly active users and 360 games launched so far and an additional 25 first-party games will be launched soon. The greatest competitor is Microsoft's Series X / S video game console, which has similar specifications and price.
- It sells the physical console, as well as a number of in-house developed game for the console (15-20% of total). It also publishes third-party games on the Playstation platform, and charges them 30% of their gross revenues. This is a high-margin service.
- It's a sticky product, because gamers are loyal to a particular platform. Online communities create even greater stickiness. And exclusive games can also help gamers lean towards either platform.



#### **Game & network segment**



## 1.1. PlayStation consoles throughout history



#### **PlayStation**

Release date: 1994

104 million sold

Price: \$299

#### **PlayStation 2**

Release date: 2000

162 million sold

Price: \$299

#### **PlayStation 3**

Release date: 2006

89 million sold

Price: \$499

#### **PlayStation 4**

Release date: 2013

116 million sold

Price: \$399







#### **PlayStation 5**

Release date: 2020

20 million sold

Price: \$399

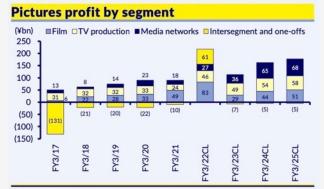


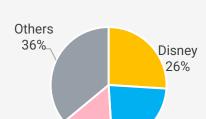


### 2. Pictures



- Sony's Picture segment has three divisions: film production via selfowned studios such as Columbia Pictures, television program production and media network operation, i.e. TV channels.
- Sony had a 23% share in the US box office in 2021, a record year.
- The majority of segment profits come from its library of TV shows, which include Seinfeld, Breaking Bad, The Crown, Cobra Kai, The King of Queens, etc.
- Every single Hollywood studio except Sony has started its own overthe-top streaming service to compete with Netflix. Sony has chosen a different strategy, selling its content to the highest bidder instead.
- Sony remains committed to the theatrical distribution model, and that makes it vulnerable to cinema attendance trends until we get out of COVID-19. Smaller productions will head straight to streaming networks, however. There's now increasing collaboration between Sony's video game segment for production of new movies, such as the recent box office success Uncharted.
- In the Pictures segment, you'll also find the media network operation, including the Indian media operation whereby Sony's new stake in its JV with Zee offers exposure to 75 Indian TV channels.
- The Pictures segment also includes the recently-acquired anime video on demand platform Crunchyroll, which merged with Funimation and is the leading manga video platform globally.





Sony

23%

Universal

15%

US box office share

Source: CLSA, Sony

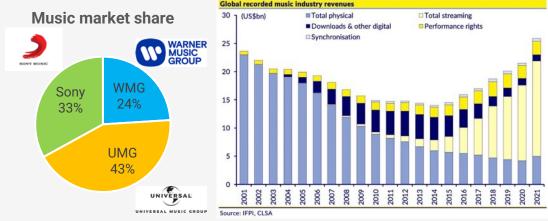
#### **Pictures segment**



### 3. Music



- Sony's music segment has three parts: recorded music, music publishing (i.e. copyrights of musical compositions) and visual media and platform businesses
- The record industry is an oligopoly between three major companies: Sony, Universal Music Group and Warner Music Group.
- In 2015, the global music industry recovered from a 15-year slump in revenues following the demise of compact disks following the rise of pirated music and the impact downloads iTunes had on album sales.
- Growth is now driven by digital streaming platforms such as Spotify, which owns 30% of the streaming market and continues to grow close to 20% per year. They can easily raise prices with limited churn, as seen in 2021 when the price hikes began (now US\$10/month for a basic US sub). The lack of differentiation between Spotify and Apple Music limits their bargaining power vs record labels.
- Since close to 2/3 of streamed music are older songs from >2 years ago, the three record labels continue to be able to extract a large portion of industry economics. That may change once artists publish directly on say Spotify, but it will take many years for this transition to take place.
- In the music publishing segment, Sony owns 5 million songs from Queen, Rolling Stones, Taylor Swift, etc. Sony is now the top music publisher by sales.
- Sony's subsidiary Aniplex produces anime content as well and is accounted for within the Music segment due to legacy reasons.



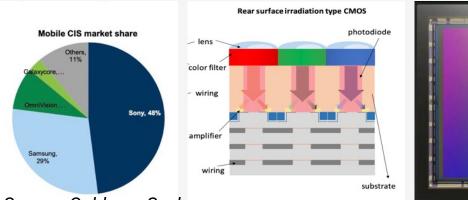
#### Music segment



### 4. Imaging & sensing solutions



- Sony owns the leading supplier of CMOS image sensors globally, with a close to 50% market share.
- "CMOS" or complementary metal oxide semiconductor is a type of image sensor that captures light through a lens, producing an electrical charge from the photons in photodiodes before being processed in an image processing chip.
- CMOS have become popular in smartphones because they can be incorporated into system-on-a-chip designs that host CPUs, GPUs and modems on a single chip. They're also cheap to produce. There's another type of image sensor called "CCD" which uses a different form of photodiode which has less image distortion and noise but is more expensive and power hungry.
- Sony was the first company globally to solve the problems with CMOS image sensors through the use of back-illuminated CMOS sensors in mass production. And Sony continues to dominate the market, being the sole supplier to Apple thanks to its superior performance.
- Sony's dominance in the image sensor market for smartphone was cemented through the 2015 acquisition of Toshiba's image sensor business.
- The image sensor segment margins were hurt in 2020 by the US sanctions on Huawei, which used to be a major customer of Sony.



Source: Goldman Sachs

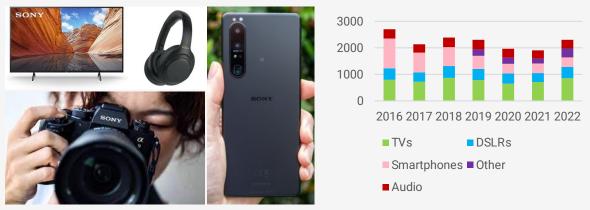
#### Image sensor segment



### 5. Consumer electronics ("Electronics products & solutions)



- The consumer electronics segment includes sales of products such as TVs, speakers, headphones, cameras and smartphones.
- When Kazuo Hirai took over Sony in 2012, the consumer segment was suffering from competition with Samsung, LG and Chinese competitors.
- He then rationalized the company by focusing solely on premium products. The consumer electronics segment has now become consistently profitable, despite smartphone losses.
- Over time, Sony has become increasingly focused on enabling content creation, for example through the sales of DSLRs to YouTube content creators.
- The smartphone segment is doing poorly. The other segments are seeing flat growth, at best.



#### **Consumer electronics segment**



### 6. Financial services



- The whole life insurance company Sony Life focuses on the sale of life insurance with an inhouse sales force of life planners.
- It focuses on USD denominated policies with an unusually high profit margin.
- Sony's life insurance segment is likely to benefit from higher interest rates that will enable the business to earn higher returns for both itself and its policy holders.
- The bank segment includes Sony Bank, an onlineonly bank formed in 2001 with no physical locations.



#### **Financial services segment**



### Sony is now run by Kenichiro Yoshida, the former CFO



- Sony's new CEO Kenichiro Yoshida took over in 2019. He was previously the CFO under former CEO Kazuo Hirai and therefore has a numbers mind with strict cost-control.
- As a CFO, he oversaw the sale of Sony's loss-making VAIO PC, camera module and battery manufacturing segment. The smartphone segment was restructured. The mass-market TV segment was exited, now only focusing on high-margin premium TVs. He also oversaw letting 1/3 of Sony's staff to improve productivity. Production moved to Southeast Asia, where labour costs are lower.
- It's possible that Sony has become more innovative under Yoshida, with new projects such as robotic leg prostheses, Al-assisted music composition software, 360 degree headphones, cameras that mimic the human eye, etc.
- That said, Sony is very much a decentralized organization, with each segment leaders running the shot, based on an overall strategy set by Yoshida with financial targets and capital allocation decided from the top. Some of the KPIs introduced by Yoshida include setting operating cash at 50% of the KPI, and putting a large weight on stock performance for the remuneration of senior management.



Kenichiro Yoshida

## Sony's division heads operate independently from the CEO





#### Jim Ryan

CEO of Sony Interactive Entertainment (PlayStation)

Joined Sony in 1994, previously in sales & marketing. He's been effectively running the PlayStation franchise since 2011.

Jim Ryan's presentation at the 2021 IR day <u>here</u>.

British citizen



#### **Anthony Vinciquerra**

CEO of Sony Pictures Entertainment.

Joined in June 2017 to turn around the business, partly by strengthening IP and introducing financial discipline.

Vinciquerra is a longtime film executive who led Fox Networks Group from 2001 to 2011. He was then an entertainment specialist at TPG Capital.

American, originally from NYC.



#### Kimio Maki

CEO of Sony Electronics.

Previously worked at Sony's imaging and sensing division.

Has also contributed to the success of Sony's Alpha-branded line-up of DSLR. But his involvement with Sony's smartphones has proven a struggle.

2015 interview with him here.

Japanese citizen.



#### **Rob Stringer**

Chairman & CEO of Sony Music Entertainment.

Long-time record label executive, having joined CBS Records in 1985 and then Epic Records in the UK in 1992.

Stringer became Chairman of Sony Music UK in 2001, Columbia Records in 2008 and then head of Sony's overall music business in 2017.

Stringer has a strong reputation among artists.

British citizen.



#### **Terushi Shimizu**

CEO of Sony Semiconductor Solutions (image sensors)

Long-time Sony executive, having joined in 1980 and rising through the ranks of the semiconductor business.

Has now been CEO of the semiconductor business since 2020 and enjoys a solid reputation.

Japanese citizen.



#### Masashi Oka:

CEO of Sony Financial Group since 2020.

Joined Mitsubishi Bank in 1979 and worked for the bank through most of his career.

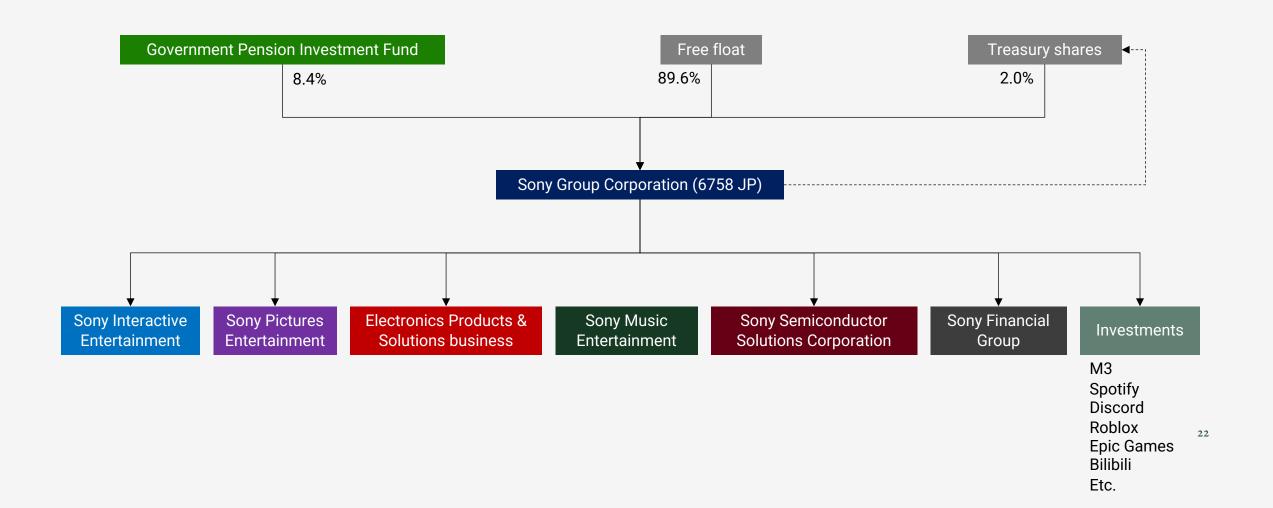
After The Bank of Tokyo-Mitsubishi UFJ acquired Union Bank, he moved to the United States and became its CEO.

After a short stint at Nikon, he was hired by Sony to head up its financial division.

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## Sony is owned by institutional investors and has no strong controlling shareholder





## Capital allocation and corporate governance



- Under Kenichiro Yoshida's tenure, Sony's return on equity has risen to levels that are impressive for a Japanese corporation – close to 20% on average. That said, the ground-work for this transformation was laid by previous CEO Kazuo Hirai.
- It seems that the company is now targeting EPS growth. But the strategic investments are earmarked – they will spend JPY 2 trillion no matter what. Doesn't sound like good policy.
- The share count did increase in 2015 through the issuance of new shares and convertible bonds, press release available here. The money was to be used to expand production capacity in image sensors.
- More recently, Sony has been diligent in repurchasing shares. 29 million shares in 2022 so far, 29 million in 2021 and 27 million in 2020 (roughly 2% of shares outstanding). But these buybacks do not seem opportunistic / value sensitive.
- Sony has become highly acquisitive. And recent M&A deals seem highly priced. Sony's acquisition of Destiny 2-developer Bungie Games cost US\$3.6 billion or US\$4 million per employee – a lot of money for a developer with only 1 game.

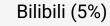


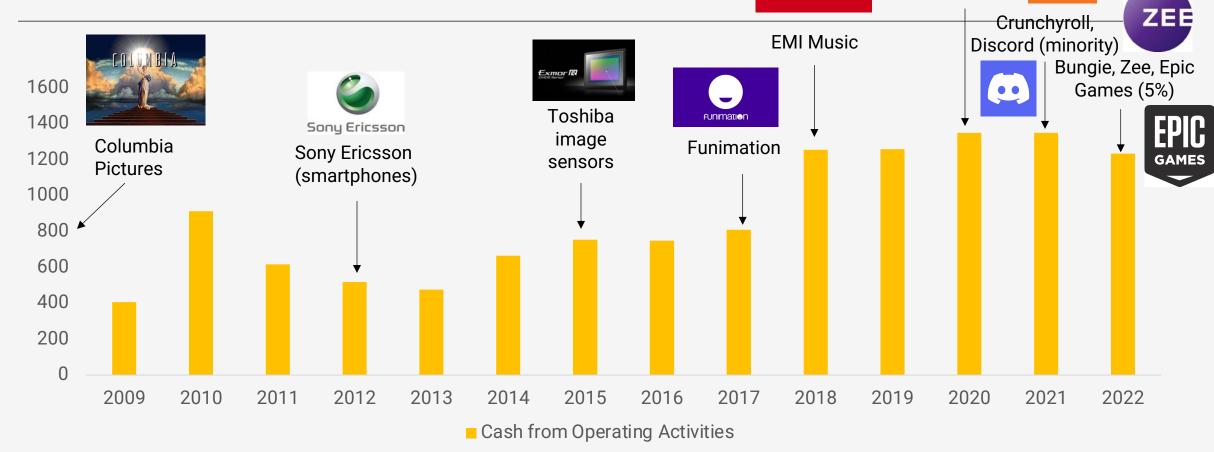
Source: Bloomberg

## Sony has become increasingly acquisitive





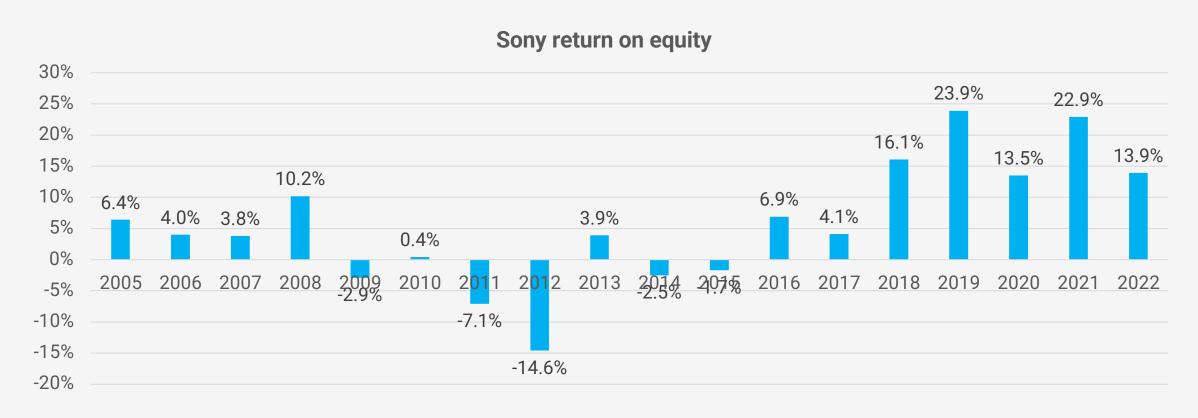




Source: TIKR

## Sony's return on equity has improved thanks to cost-cutting and monetisation of the PlayStation platform via digital games





Source: TIKR

## Sony used to be a bloated organisation... but no more

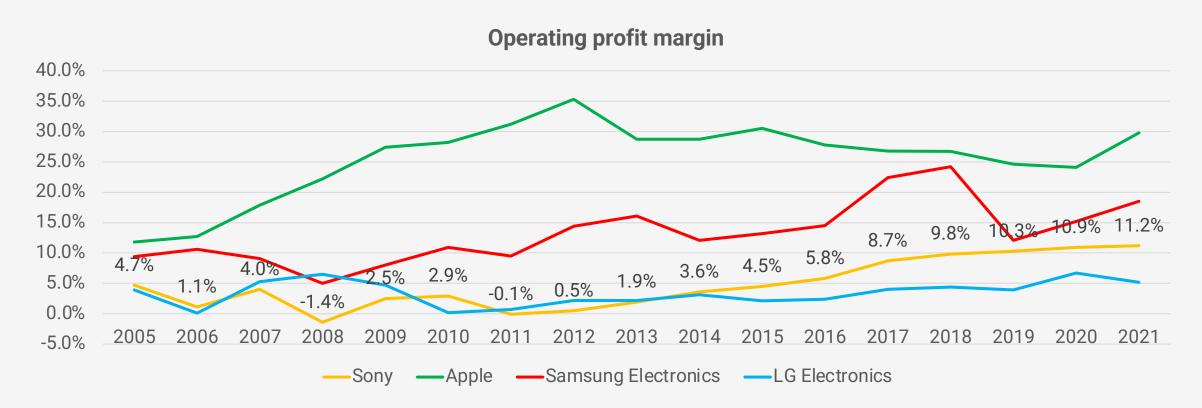




Source: Bloomberg

## Sony's margins do not seem excessive yet in its transition to software



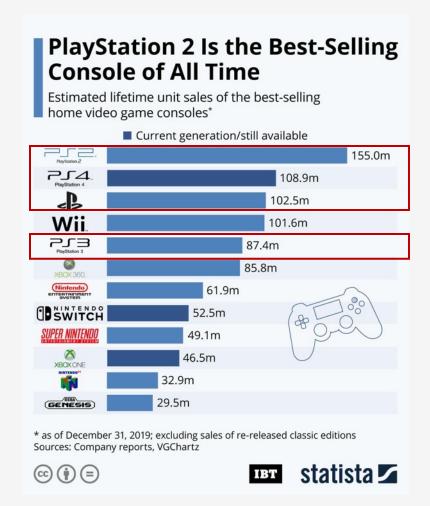


Source: TIKR

## Sony's competitive advantages



- Brand name with broad consumer mindshare: Sony enjoys a valuable brand name, and its consumer electronics division continues to contribute to the positive image that many consumers have of the company.
- Video game consoles are a toll road: It's hard to overstate Sony's domination of the video game console market. Controlling the PlayStation console platform is effectively a toll road booth in the video game industry. Sony can charge 30% on the distribution of third-party games on the platform at high contribution margins. The barriers to entry are significant since you need to convince third-party developers to adjust games to your platform. Meanwhile, Sony's 100 million+ monthly active users are loyal to the platform thanks to online communities.
- Ownership of intellectual property: In the Pictures and Music segments, Sony owns evergreen intellectual property that continues to be in high demand now the streaming services are clamoring for high-quality content.
- Synergies across segment: Under the "One Sony" vision, the company has started to use IP across several of its platforms, including pictures, music and video games. An example is the recent blockbuster movie "Uncharted".



## Which is the better platform? PS5 or Xbox X/S – slight advantage to PS5

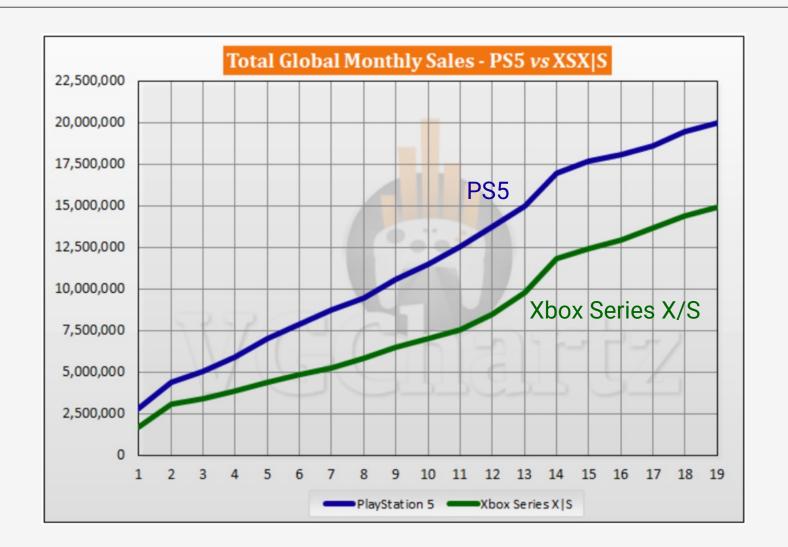


- PlayStation 4 was an incredibly successful console vs its then competitor Xbox One, which was priced too-high at \$499 at PS4's \$399. Xbox One also had issues with digital rights.
- Today, the two competitors are similar. Xbox Series X is priced almost identically with PlayStation 5 and has very similar specs. But a test of the two platforms with third-party games suggest PS5 had a <u>15%</u> performance advantage for Assassin's Creed Valhalla.
- There is also a PlayStation 5 digital version priced at \$399 and an entry-level version called Xbox Series S that's <u>really underwhelming</u>.
- PlayStation continues to have more exclusive games, though Microsoft's acquisition of Bethesda is closing the gap.
- The PlayStation Plus costs \$10/month for the basic tier and \$15/month for the extra version that offers access to 400 games. Xbox Game Pass Ultimate costs \$15/month for access to 300 games. But crucially, Xbox Game Pass Ultimate offers access to newly released first-party titles, making it a better deal overall.
- According to Sony, the PS5 development environment allows for the easiest content creation ever. If so, third party support will be excellent.

	PS5	Xbox Series X		
Price	\$500 (PS5); \$400 (PS5 Digital Edition)	\$500		
Key Exclusives	Spider-Man: Miles Morales, Horizon II: Forbidden West, Gran Turismo 7	Halo Infinite, Senua's Saga: Hellblade 2, Forza Motorsport 8, State of Decay 3		
Backwards Compatibility	Almost all PS4 games, including optimized PS4 Pro titles	All Xbox One games / Select Xbox 360 and original Xbox games		
CPU	8-core 3.5 GHz AMD Zen 2	8-core, 3.8 GHz AMD Zen 2		
GPU	10.3 teraflop AMD RDNA 2	12.0 teraflop AMD RDNA 2		
RAM	16 GB GDDR6	16 GB GDDR6		
Storage	825 GB custom SSD	1 TB custom NVMe SSD		
Resolution	Up to 8K	Up to 8K		
Frame Rate	Up to 120 fps	Up to 120 fps		
Optical Disc Drive	4K UHD Blu-ray (Standard PS5 only)	4K UHD Blu-ray		

## PlayStation 5 is so far outperforming Xbox Series X/S globally though the disparity may be due to supply chain component shortages





Source: VGChartz

## The share price is higher level than during the Howard Stringer years





Source: Bloomberg

## Third Point's Sony activist campaign



- In May 2013, Dan Loeb's activist hedge fund Third Point announced that it had taken a 6% position in Sony for a total value of US\$1.4 billion. It then pushed Sony to undertake the following reforms:
  - Take public a 15-20% stake in Sony Entertainment through subscription rights to current shareholders to allow it thrive independently from the parent
  - Streamline product offerings to improve profitability
  - Improve its prospects in underappreciated assets such as Sony Financial, M3, Olympus (since divested), Japan Display (since divested), its intellectual property portfolio, US\$11.5 billion in deferred tax assets and the brand.
- Sony dismissed the campaign, at least publicly. But it's not impossible that Kazuo Hirai listened to some of the suggestions put forward by Mr Loeb. Third Point sold its shares in 2014.
- In 2019, Third Point launched a second campaign. In a 100 slide presentation available <u>here</u>, Third Point asked Sony to reduce complexity of the business:
  - Divest its imaging sensors business
  - Refocus Sony as an entertainment company (gaming, music and pictures)
  - Stop reinvesting in the loss-making consumer electronics businesses
  - Sell portfolio of non-core listed equities
- Again, Sony politely declined to engage with Third Point. But it may still have had some impact.







Hedge fund manager Dan Loeb

## Long-term industry trends



#### Video games



- The market for interactive games has been growing in the single-digits every year in terms of the number of users. It's becoming more social in nature, with multiplayer games taking share.
- The reason is that video games offer great value for money: an AAA game may cost \$60 and offer 60 hours of entertainment, compared to the cost of a cinema ticket of \$10 for 1-2 hours of entertainment. Multiplayer game increase the life span even more.
- Young people are incredibly receptive to video games, and that's true across the globe.
- Freemium games is another key trend. Roughly 25% of PlayStation Store spending over the past year has been on in-game purchases for free games such as Fortnite, Genshin Impact, Call of Duty Warzone, Apex Legends and Rocket League.

#### Music



- Music streaming services are enjoying secular growth.
- The subscriber penetration rate in developed markets is currently around 30% and can probably rise to 50% over the long run, as seen for Spotify in its home country of Sweden as well as OTT video streaming service penetration of 47% in the US.
- In 2021, Spotify grew roughly 20% year-on-year and most believe that this growth will continue.

#### **Pictures**



- The biggest trend in Pictures has been the rise of OTT platforms such as Netflix, with original content spend rising 76% per year the past four years.
- OTT platforms have also caused the theatrical release window to narrow from 8-9 months to in many cases just a few months.
- Studios other than Sony have all created their own apps to distribute their content on a subscription basis. Neither of them make much money.
- Barriers to entry have essentially been removed with the Internet. But theatres still create a buzz around new movies, and Sony therefore
  remains committed to the theatrical release model. Movies released directly on OTT platforms tend to be forgotten about.

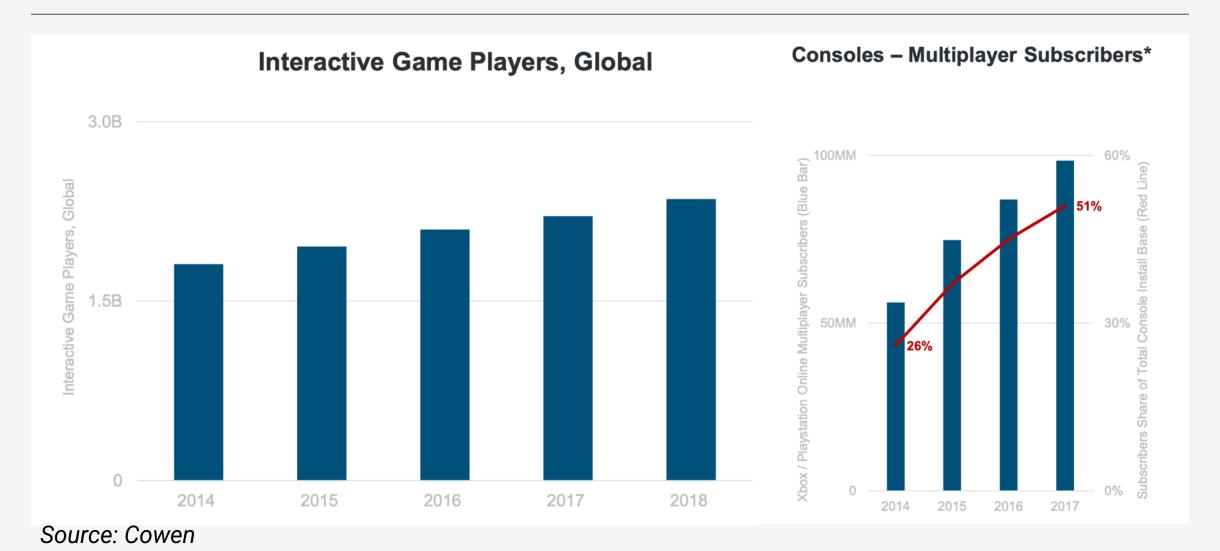
#### Image sensors



- While the smartphone market isn't growing in volume terms, premium smartphones are becoming more advanced.
- CMOS image sensors are becoming larger, and the number of cameras per smartphones is increasing as well.
- Another trend is Apple's resurgence since 2019, as Apple's phones have improved battery life, cameras and the ecosystem.

## The gaming market is growing, especially for multi-player games



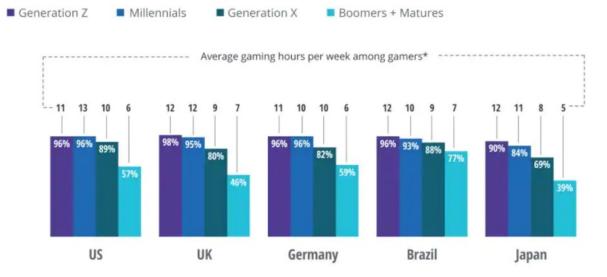


## Deloitte survey: almost ALL young people are gamers, playing 8-13 hours per week



#### In the countries we surveyed, nearly all in the younger generations are gamers

Consumers who play video games (percentage consumers)



Notes: N (All US consumers) = 2,000; (All UK consumers) = 1,002; (All Germany consumers) = 1,002; (All Brazil consumers) = 1,000; (All Japan consumers) = 1,000. \*Among only those who are occasional or frequent "gamers": those who play more than "never" across multiple devices.

Source: Digital media trends, 16th edition (March 2022).

Deloitte Insights | deloitte.com/insights

FIGURE 8

### Gaming supports social and emotional needs and takes time away from other entertainment

Gamers who agree with the following statements (percentage gamers)

	US	UK	Germany	Brazil	Japan
Playing video games helps me relax	78	74	69	84	53
Personalizing my game character or avatar helps me express myself	61	54	43	69	39
Video games have helped me get through a difficult time	59	57	40	73	33
Playing video games help me stay connected to other people	53	52	38	69	35
l often discover new music while I'm playing video games	51	50	35	71	41
Making connections with others while playing video games is important to me	48	50	39	61	31
Video games have taken time away from my other entertainment activities	49	55	35	45	44

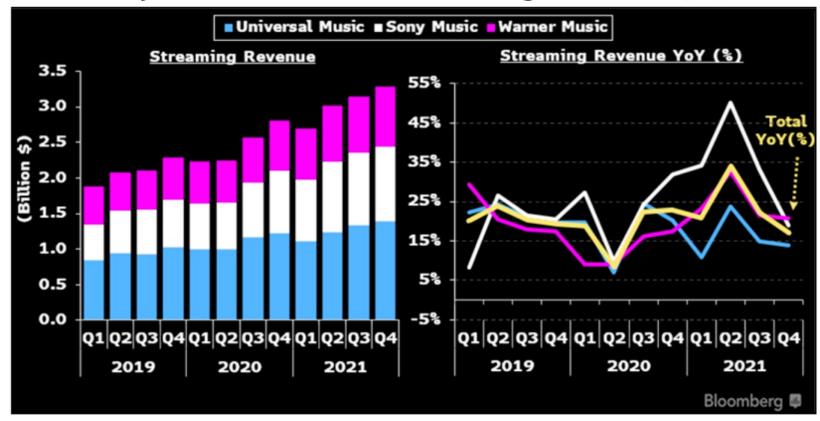
Notes: N (US gamers) = 1,624; (UK gamers) = 749; (Germany gamers) = 783; (Brazil gamers) = 884; (Japan gamers) = 627. Source: Digital media trends, 16th edition (March 2022).

Source: Deloitte

## Music label streaming revenue keeps growing at around 20% per year... but has the VC bubble impacted spending?







Source: Bloomberg

### What will change for Sony? The 4th medium-term plan ("MRP4")



- In April 2021, Sony announced its fourth medium-term strategy for FY2022-2024 ("MRP4")
- It targets total "strategic investments" in IP, technological solutions and share repurchases of JPY 2 trillion (50% of operating cash flow). This number is higher than the JPY 1.4 trillion targeted during the previous medium-term strategy.
- Target EBITDA of JPY 4.3 trillion for the three-year period and operating cash flow of JPY 4.0 trillion.
- It has several pillars:
  - Cross-collaboration between Sony Pictures and PlayStation game IP, and Sony Pictures and Sony Music
  - Expanding the PlayStation community through cloud streaming services and forming direct relationships with gamers.
  - Heavy investment in CMOS image sensor segment
  - Launching a new electric vehicle called Vision-S

#### 1. What will change for Sony? PlayStation



- During the pandemic, individuals have stayed at home and spent more time playing and purchasing games.
   This one-off effect is now going into reverse.
- PlayStation 5 looks like it will be a major success with anecdotal evidence suggesting 70/30 purchase intentions for PS5 vs Xbox Series X/S. It's driven by better performance and more exclusive games. PS5 has been losing money on the console but became profitable in mid-2021.
- PlayStation 5 supply has been constrained by component shortages. There are now signs that those shortages are easing.
- Sony has just launched a new PlayStation Now product, which it believes will improve retention and ARPU.
   It currently has 47 million subscribers and this number is likely to breach 50 million in the next year.
- The trend of digitalisation of console games has only come half-way at 50%. Digital games are way more profitable with high margins.
- The next frontier will be to develop live games that bring people together into a community, thus creating network effects. Developer Bungie will be a key asset in this shift.
- Sony is now porting over some games to other platforms, e.g. first-party games such as Detroit: Become
  Human, Horizon Zero Dawn, Days Gone and God of War to the PC market. The reason is that they want PC
  gamers to eventually switch over to the PlayStation platform some day in the future.



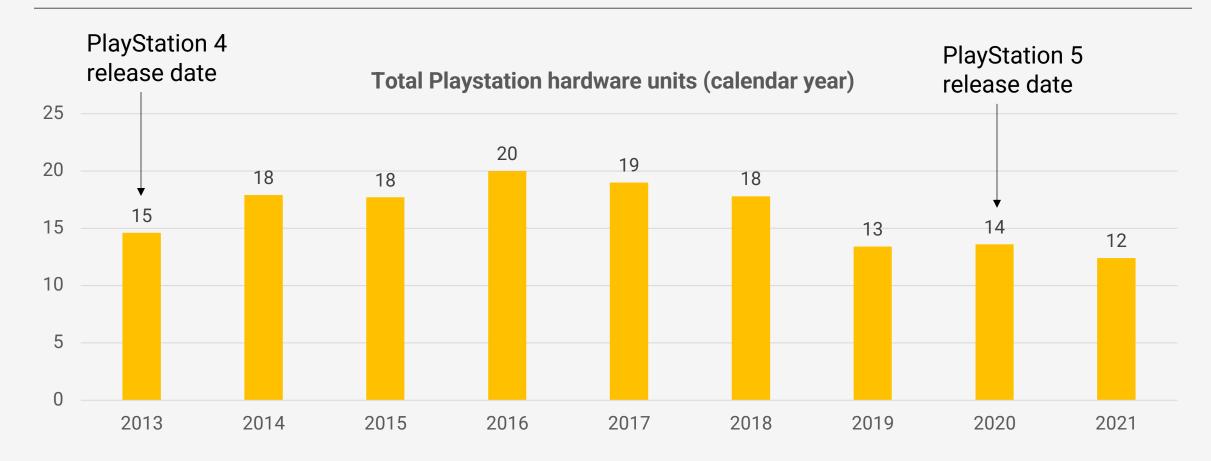
# 1.1. The top-selling video games in the US in 2021 are mostly available across both platforms... and none are Xbox exclusives



Game	Platform	Exclusive or not?
Call of Duty: Vanguard	PlayStation 5 / Xbox Series X	No
Call of Duty: Black Ops: Cold War	PlayStation 5 / Xbox Series X	No
Madden NFL 2022	PlayStation 5 / Xbox Series X	No
Pokemon: Brilliant Diamond	Nintendo Switch	No
Battlefield 2042	PlayStation 5 / Xbox Series X	No
Marvel's Spider-Man: Miles Morales	PlayStation 5	Yes
Mario Kart 8	Nintendo Switch	Yes
Resident Evil: Village	PlayStation 5 / Xbox Series X	No
MLB: The Show 2021	PlayStation 5 / Xbox Series X	No
Super Mario 3D World	Nintendo Switch	Yes

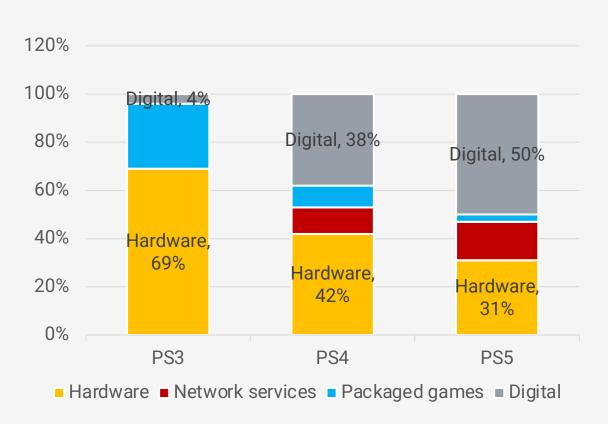
### 1.2. The Playstation 5 up-cycle hasn't even begun yet. Management expects FY2023 to be the biggest ever year for PlayStation (i.e. >22 million units)

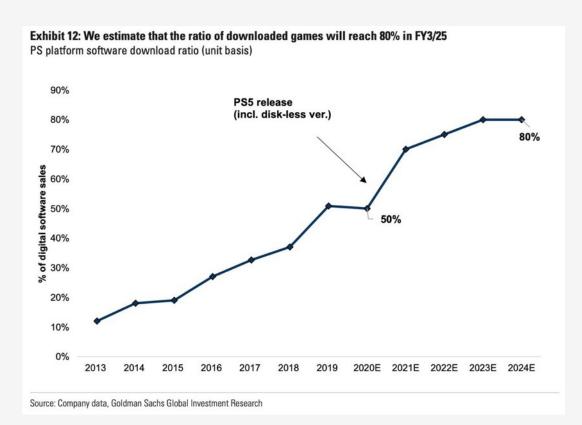




#### 1.3. The digitalisation trend has room to run







Source: Goldman Sachs

### 1.4. June 2022: "PlayStation Now" has become "PlayStation Plus", with two added tiers above it: Extra + Premium with access to past PS1-4 games







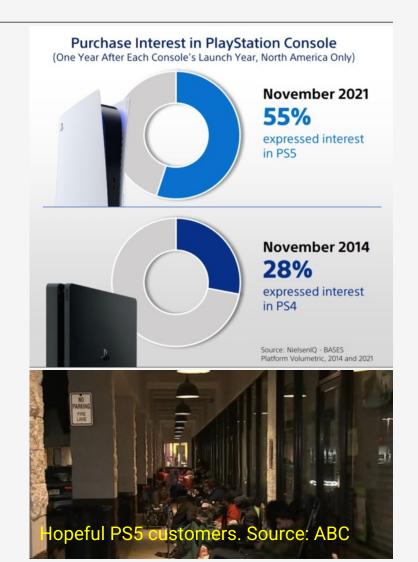
The New PlayStation Plus								
Essential	Extra	Premium						
■ \$9.99 monthly	■ \$14.99 monthly	■ \$19.99 monthly						
<ul> <li>Online multiplayer access</li> <li>Two monthly downloadable games per month</li> </ul>	<ul> <li>400 additional games downloadable games from PS4/PS5</li> <li>5-7 downloadable games per month</li> </ul>	<ul> <li>Additional 340 games, including downloadable classic games from PS1-2/PSP and PS1-4 game streaming on console and PC</li> <li>10 downloadable games per month</li> </ul>						

Launch staggered across Asia, Americas, Europe between May and June 2022

#### 1.5. There are signs of strong demand for the PlayStation 5

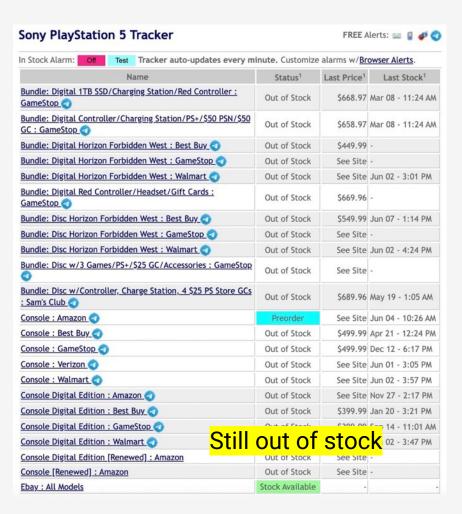


- Sony Interactive CEO & President Jim Ryan: "By far, the standout feature of the launch... is the extraordinary demand that we've built for our latest console. Even now, more than 6 months after the launch, demand remains insatiable with inventories selling out within seconds have been placed on the market. I've been involved in every PlayStation launch, and I've never seen anything like this."
- Long lines formed at the launch day across the world in hope of securing a PS5 console.
- Around launch in late 2020, the number of bids on PlayStation 5 was 17.8 vs Xbox's 12.3, according to market research company MarkSight.
- Supply constraints have kept PS5 sales roughly in line with PS4.
   But once those constraints ease, PS5 could well compete with PS4's 116 million consoles sold over its lifetime if not more.



#### 1.6. Supply chain problems are now easing





- The Playstation 5 continues to be sold out everywhere.
- But prices on eBay have gone from \$830 to \$730 for the Digital Edition, suggesting greater supply has come online.
- In early May, Sony's CFO Hiroki Totoki said that Sony has revised up its FY2023 PS5 console sales forecast from last year's 7.8 million last year to 18.0 million the coming year, suggesting a significant easing in Sony's supply constraints.
- Anecdotal evidence that the supply of PS5 is easing:
  - "PS5 was the best performing machine [in the UK], thanks to a significant improvement in stock levels. It is the best month of the year for PS5 so far, with sales up 59% over March [2022]."
  - Journalist Tae Kim reported <u>here</u> that PS5 availability alerts have become more numerous in late May than at any time since the launch of the console in November 2020.

# 1.7. The pipeline of PlayStation games to be published in 2022/23... God of War is one of the most anticipated releases



#### Major PlayStation Games in 2022 and Beyond

2022	Game Titles	Publisher	Release	First Party	PS Exclusive
	Uncharted: Legacy of Thieves Collection	Sony Interactive Entertainment	Jan	✓	PS4/PS5
	Horizon Forbidden West	Sony Interactive Entertainment	Feb	✓	PS4/PS5
	Elden Ring	Bandai Namco, FromSoftware	Feb		
Q1	Destiny 2: The Witch Queen	Bungie (Pending Approval)	Feb		
	Gran Turismo 7	Sony Interactive Entertainment	Mar	✓	PS4/PS5
	Ghostwire: Tokyo	Bethesda Softworks	Mar		PS5
	Lego Star Wars: The Skywalker Saga	Warner Bros. Interactive Entertainment	Apr		
	MLB The Show 22	Sony Interactive Entertainment	Apr	~	
Q2	Evil Dead: The Game	Saber Interactive	May		
	Sonic Frontiers	Sega	Jun		
	Stray	Annapurna Interactive	Q2		PS4/PS5
	Saints Row	Deep Silver	Aug		
	Forspoken	Square Enix	Oct		PS5
	Gotham Knights	WB Games Montréal	Oct		
Q3-Q4	Marvel's Midnight Suns	2K Games	Q3/Q4		
	Dead Space	Electronic Arts	<b>Q4</b>		
	Hogwarts Legacy	Warner Bros. Interactive Entertainment	Q4		
	A Plague Tale: Requiem	Focus Home Interactive	TBD		
TBD	God of War Ragnarök	Sony Interactive Entertainment	TBD	*	PS4/PS5
Beyond	Final Fantasy XVI	Square Enix	TBD		

Source: Bloomberg

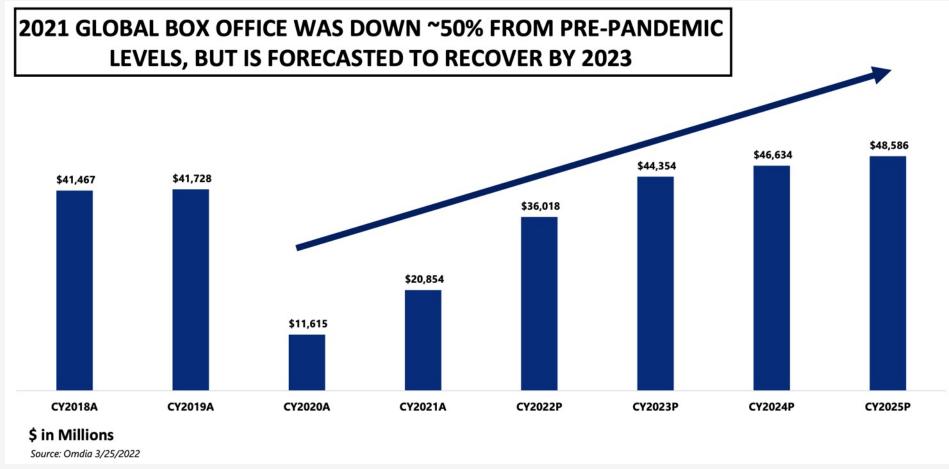
#### 2. What will change for Sony? Pictures



- Recovery from COVID-19: Global box office revenue dropped roughly 50% from 2019 to 2021 due to the pandemic. Cinema attendance is now recovering, albeit slowly.
- Collaborations: Under Anthony Vinciquerra, Sony Pictures continues to rationalise the business to better utilise the intellectual property, especially under the One Sony vision of cross-collaborations. In 2019, Sony launched film studio Playstation Productions to develop and produce TV shows and movies based on past Playstation games. One example of such a project is the Uncharted movie released in February 2022. Future projects will include The Last of Us, Ghosts of Tsushima, Twisted Metal. However, films adapted from games have typically not done very well, on average earning just 2x budget at the box office vs 4-6x for Marvel. It remains to be seen whether Sony can repeat the success of Uncharted.
- Netflix & Disney: In 2021, Sony signed a 5-year contract exclusive first pay window licensing deal with Netflix that will give it access to Sony Pictures movie releases in the US following the typical 8-9 month theatrical window. It's also signed a 5-year contract with Disney for both streaming and TV rights for Sony Pictures movies in the US following the Netflix window. These two deals are worth about US\$3 billion together, which will come on top of box office revenues. This is significant given US\$600 million in operating profit for the segment in FY2021, or US\$3 billion across five years.
- **New movies**: In the upcoming year FY2023, Sony will release two movies from the Spider-Man Universe, along with a thriller starring Brad Pitt and Sandra Bullock. But overall, Sony's box office revenues are likely to decline after an incredible year in FY2022 when Spider-Man: No Way Home earned a US\$1.9 billion in the worldwide box office, on top of Ghostbusters: Afterlife, Uncharted and Venom.

2.1. Box office revenue was down roughly 50% in calendar year 2021 vs prepandemic levels. Sony's performance is astounding, relatively speaking.





Source: Sony

### 2.2. Among the new movie releases, Morbius, Bullet Train and Kraven the Hunter could become blockbusters



- Sony's movie pipeline for FY2023 does not seem as impressive as that of FY2022. So expect Sony box office revenue to drop, despite an expected COVID-19 recovery.
- But the following movies seem to have potential:
  - Morbius: The third film in Sony's Spider-Man Universe, starring Jared Leto as Michael Morbius
  - Bullet Train: Five assassins find themselves on a fast-moving bullet train from Tokyo to Morioka, starring Brad Pitt and Sandra Bullock
  - Kraven the Hunter: Another Spider-Man Universe movie about a Russian immigrant hunter played by JC Chando.







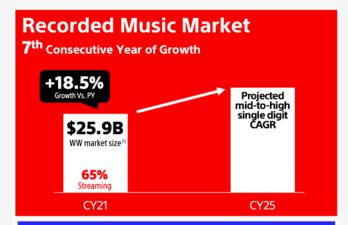


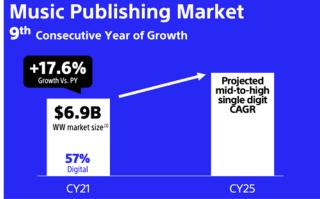
Movie	Release date
Morbius	1 April 2022
Father Stu	13 April 2022
Where the Crawdads Sing	15 July 2022
Bullet Train	29 July 2022
The Man from Toronto	12 August 2022
The Bride	26 August 2022
The Woman King	16 September 2022
Lyle, Lyle, Crocodile	7 October 2022
I Wanna Dance with Somebody	21 December 2022
A Man Called Otto	25 December 2022
Kraven the Hunter	13 January 2023
Harold and the Purple Caryon	27 January 2023
It's all coming back to me	10 February 2023

#### 3. What will change for Sony? Music



- Sony sees mid- to high-single digit growth in the music market through 2025, driven by the streaming market's double-digit growth. Demand from streaming services will most likely continue to push up the value for Sony's recorded music library.
- This growth is driven both by a greater penetration rate with the number of paid users rising 12% per year. On top of price hikes from Spotify and Apple Music, flowing through to the record labels.
- Sony's strategy is to capture a larger share in the indie market, signing up new and promising artists.
- The recent acquisition of Som Livre in Brazil will create a leadership position in the country and add to segment revenues.

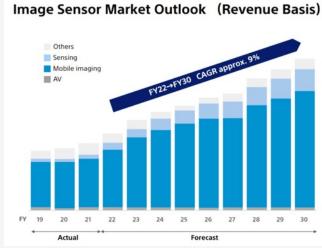


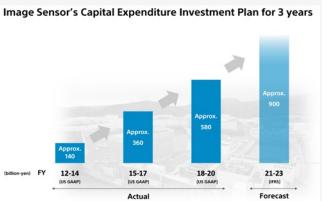


#### 4. What will change for Sony? Image sensors



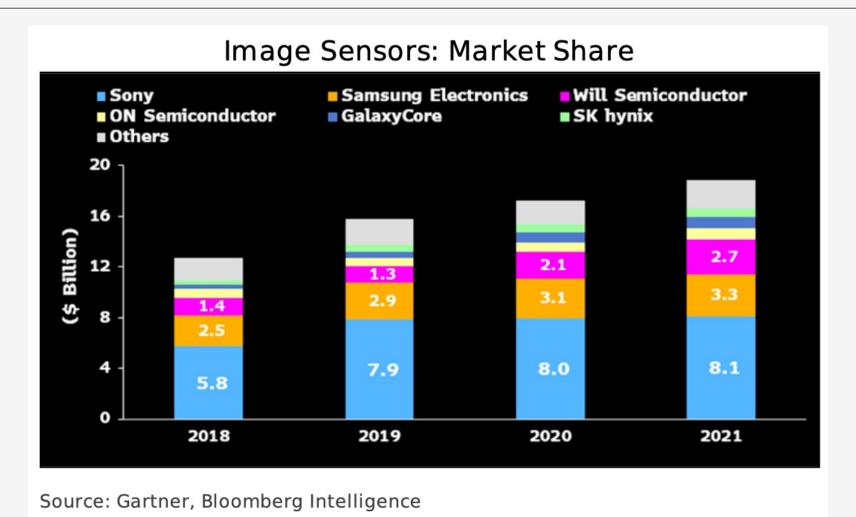
- Sony expects the overall image sensor market to grow around 9% per year during this
  decade. The company targets a 60% revenue market share by 2026, meaning that it wants to
  grow much faster than the overall market roughly 18% per year.
- But that's a target and may not be realistic given tough competition from Samsung and potentially Chinese smaller peers.
- Growth in the image sensor market is driven by greater sensor sizes in high-end models.
   Larger sensors means that more light can be captured, more pixels and finer details.
- Sony built a new plant in the Nagasaki Prefecture opened in April 2021, which increased capacity by tens of thousands of wafers. The Fab5 building will be operational in July 2022.
   Partly thanks to greater capacity, Sony expects image sensor sales to grow 35% in FY2023.
- Growth areas other than mobile include advanced drive-assistance systems and autonomous driving. Every car will need to have a great number of cameras.
- Image sensor capex will be JPY 900 billion for FY2022-2024 vs JPY 580 billion spent during the previous five-year period.





4.1. Sony lost market share in 2020-21 to Will Semiconductor, but due to the Huawei issue rather than any inherent competitive advantage.





#### 5. What will change for Sony? Other businesses



- 1. Consumer electronics: In the consumer electronics business, it looks like the focus will be on serving the creator community, with cameras, video editing software, etc. Other than that, I'm not seeing much to be optimistic about. The smartphone business is now focusing on the high-end camera niche, but iPhones and Samsungs already produce satisfactory image quality.
- 2. Sony Financial: Sony is focused on improving the productivity of Sony Life's life planner sales force. Operating income is expected to grow at a 5% CAGR with a targeted ROE of >8%, which is in line with higher-quality Japanese financial institutions. FY2023 will include a gains of sale of real estate and recovery of funds related to unauthorized withdrawals.
- 3. Other: In 2019, President Yoshida said he committed for Sony to become innovative again, daring to bet on long-term projects. Those include precision control robots, a wearable device that can track your entire body for immersive video games, prosthetic legs, etc. Sony has announced plans for a commercial launch of an EV product developed together with Honda and Yoshida strongly believes in the future of EVs. And Sony's VR product looks innovative and promising (FY2023 launch)

#### Sony CEO Urges Return to Geeky **Engineering Roots**

- Labs have been working on high-impact, long-term projects
- Yoshida offered a rare look into Sony's R&D thinking





#### 5.1. Sony / Honda's new electric vehicle



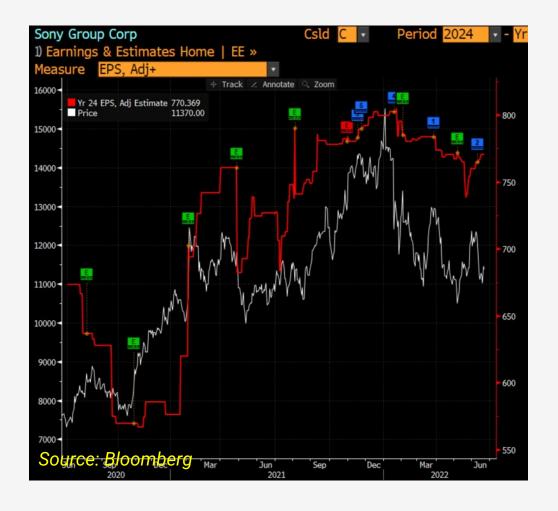
- CEO Yoshida believes that mobile phones was the key megatrend of the past decade and that electric vehicles will be the next megatrend for the next decade.
- In January 2022, Sony announced its Vision-S 02 SUV, with launch planned for 2025.
- Sony and Honda will collaborate on the EV with Honda focusing on manufacturing.
- Sony will contribute with:
  - A new mobility network service platform.
  - Safety features such as sensors and sound/human-machine interface systems
  - Entertainment systems for music, movies, games and consumer electronics
  - Gesture controls, voice controls and cloud connectivity



#### Sell-side expectations



- Sell-side analysts has Sony on FY2024 EPS of JPY 770.
   More bullish analysts include Atul Goyal at Jefferies and more bearish analysts include Damien Thong at Macquarie.
- A few recent comments from sell-side analysts:
  - "Sony could do well given the weakening of the Japanese Yen and its large contribution from overseas earnings"
  - "Sony's CMOS image sensors now look set to achieve record profits, aided by a shift toward larger smartphone cameras"
  - "We expect real OP to decline 8% in FY3/23 driven by: 1) games, due mainly from ¥50bn in acquisition costs; 2) pictures, due to a rise in marketing costs and weaker box office; 3) sharp contraction in electronics driven by weakening demand, higher marketing costs and pricing pressure; and 4) higher HQ costs related to EV mobility business."



### Sony's peers trade around 16x P/E and 12x EV/EBIT



2023e	Ticker	Country	Mkt cap (US\$bn)	EV/S	EV/EBIT	P/E	Div yield
Sony	6758 JP	Japan	106.8	1.37x	12.8x	16.3x	0.6%
Apple	AAPL US	United States	2,129.3	4.94x	16.6x	20.2x	0.8%
Samsung Electronics	005930 KS	South Korea	272.2	0.73x	3.8x	7.8x	3.0%
Microsoft	MSFT US	United States	1,852.2	8.03x	18.9x	23.1x	1.1%
Nintendo	7974 JP	Japan	55.3	3.33x	9.6x	16.0x	3.4%
Activision Blizzard	ATVI US	United States	58.4	5.38x	13.6x	19.4x	0.7%
Electronic Arts	EA US	United States	35.9	4.38x	13.7x	18.0x	0.5%
Bandai Namco	7832 JP	Japan	15.5	2.02x	15.0x	23.7x	2.1%
Ubisoft	UBI FP	France	5.7	2.38x	15.8x	21.6x	0.0%
Square Enix	9684 JP	Japan	5.4	1.63x	10.2x	17.0x	1.7%
Walt Disney	DIS US	United States	171.8	2.37x	15.2x	17.2x	1.5%
Lions Gate	LGF/B US	United States	2.0	1.53x	84.4x	18.6x	0.0%
Spotify	SPOT US	Sweden	19.1	1.22x	1964.0x	192.5x	0.0%
Universal Media Group	UMG NA	Netherlands	35.9	3.43x	17.6x	21.1x	2.5%
Warner Music	WMG US	United States	12.9	2.58x	17.4x	20.7x	2.7%
Texas Instruments	TXN US	United States	138.5	6.95x	14.3x	17.0x	3.4%
Analog Devices	ADI US	United States	75.2	6.34x	13.2x	14.3x	2.3%
NXP Semiconductor	NXPI US	United States	41.4	3.60x	10.3x	11.1x	2.2%
Microchip Tech	MCHP US	United States	31.9	4.99x	11.1x	10.5x	2.1%
Qorvo	QRVO US	United States	10.1	2.48x	8.56x	8.93x	0.0%
ON Semiconductor	ON US	United States	22.8	2.96x	9.0x	10.7x	0.0%
Infineon	IFX GR	Germany	33.3	2.46x	11.9x	13.1x	1.6%
Murata	6981 JP	Japan	39.5	2.40x	10.0x	13.7x	2.0%
Renesas	6723 JP	Japan	19.2	2.18x	6.5x	9.1x	0.3%
TDK	6762 JP	Japan	12.5	0.85x	8.8x	10.3x	2.5%
Rohm	6963 JP	Japan	7.4	1.38x	8.5x	14.8x	2.1%
Taiyo Yuden	6976 JP	Japan	4.8	1.66x	8.6x	11.8x	1.7%
Alps Alpine	6770 JP	Japan	2.4	0.39x	7.5x	10.6x	2.5%
Average ex-Sony			189.3	3.06x	86.8x	21.9x	1.6%
Median ex-Sony			31.9	2.46x	11.9x	16.0x	1.7%

# Sony has traded around the current level of 16x P/E and 10x EV/EBIT over the past five years





Source: Bloomberg

#### Assumptions



- **Games**: Higher PlayStation 5 console sales and associated games will start to benefit the bottom-line soon. A greater share of digital games will improve margins. The acquisition of Bungie will weigh on earnings through JPY 50 billion per year amortisation of employee benefits.
- Consumer electronics: It's likely that at least some of the DSRL and TV recovery in FY2022 was due to COVID-19 and that we should now expect profits to drop somewhat. That said, in the narrow niche of DSLRs for content creation, demand is likely to continue growing 20%.
- **Music**: High-single digit top-line growth in line with guidance and improving margins as contribution margins from streaming are high. Live events are likely to recover post-COVID.
- **Pictures**: Sony enjoyed incredibly success in FY2022 with Venom, Spider-Man: No Way Home and Uncharted all achieving major success and total box office revenues of US\$3.3 billion. That's not going to repeat. But the Netflix and Disney contract on top of easily a US\$1 billion at the box office should lead to close to positive EBIT growth in the next 3 years. A recovery in the global box office is a tailwind.
- **Image sensors**: Guidance is very positive but more realistically, low teens top-line growth seems like a better assumption.
- **Financial services**: Assume a yearly growth of about 8%, in line with the targeted return on capital.

# The above assumptions would point toward a P/E closer to 11.1x and EV/EBIT closer to 9.3x by 2026



Sony Corporation (6758 JP) (calendar year end Mar)	2019	2020	2021	2022	2023	2024	2025	2026
Games	2311	1978	2656	2740	3286	3403	3573	3752
Electronics	2321	1991	1921	2339	2011	1910	1815	1724
Pictures	987	1012	759	1239	954	1030	1113	1202
Music	807	850	940	1117	1206	1303	1407	1520
Image sensors	879	1071	1012	1076	1216	1374	1512	1633
Financial services	1283	1308	1669	1534	1611	1659	1709	1760
Other	346	251	229	99	211	217	224	231
Corporate	-268	-200	-187	-222	-200	-206	-212	-219
<u>Total revenues</u>	<u>8666</u>	<u>8260</u>	<u>8999</u>	<u>9922</u>	<u>10295</u>	<u>10691</u>	<u>11140</u>	<u>11602</u>
Games	311	238	342	346	443	529	593	663
Electronics	77	87	128	213	161	115	109	103
Pictures	55	68	80	217	167	189	213	241
Music	232	142	185	211	217	235	253	274
Image sensors	144	236	146	156	195	234	272	310
Financial services	161	130	155	150	258	186	195	205
Other	-11	16	7	18	6	7	7	7
Corporate	-75	-72	-87	-109	-112	-115	-119	-122
Total EBIT	<u>894</u>	<u>845</u>	<u>955</u>	<u>1202</u>	<u>1335</u>	<u>1377</u>	<u>1524</u>	<u>1681</u>
Financial income	117	-46	43	-85	-24	-25	-25	-26
<u>PBT</u>	<u>1012</u>	<u>799</u>	<u>998</u>	<u>1118</u>	<u>1311</u>	<u>1352</u>	<u>1498</u>	<u>1654</u>
Tax	<u>-45</u>	<u>-177</u>	<u>46</u>	<u>-229</u>	<u>-275</u>	<u>-284</u>	<u>-315</u>	<u>-347</u>
Net profit	<u>967</u>	<u>622</u>	<u>1044</u>	<u>888</u>	<u>1035</u>	<u>1068</u>	<u>1184</u>	<u>1307</u>
Minorities	<u>-40</u>	<u>-50</u>	<u>-14</u>	<u>-6</u>	<u>-10</u>	<u>-11</u>	<u>-12</u>	<u>-13</u>
NPAT to controlling	<u>926</u>	<u>572</u>	<u>1030</u>	<u>882</u>	<u>1025</u>	<u>1058</u>	<u>1172</u>	<u>1294</u>
<u>EPS</u>	<u>735</u>	<u>454</u>	<u>816</u>	<u>700</u>	<u>813</u>	839	<u>929</u>	<u>1026</u>
DPS	<u>35</u>	<u>45</u>	<u>55</u>	<u>65</u>	<u>75</u>	<u>85</u>	<u>95</u>	<u>105</u>
<u>P/E</u>	<u>15.5x</u>	<u>25.1x</u>	<u>14.0x</u>	<u>16.3x</u>	<u>14.0x</u>	<u>13.6x</u>	<u>12.3x</u>	<u>11.1x</u>
EV/EBIT	<u>17.5x</u>	<u>18.5x</u>	16.4x	<u>13.0x</u>	<u>11.7x</u>	<u>11.4x</u>	<u>10.3x</u>	9.3x
Div yield	0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.8%	0.9%

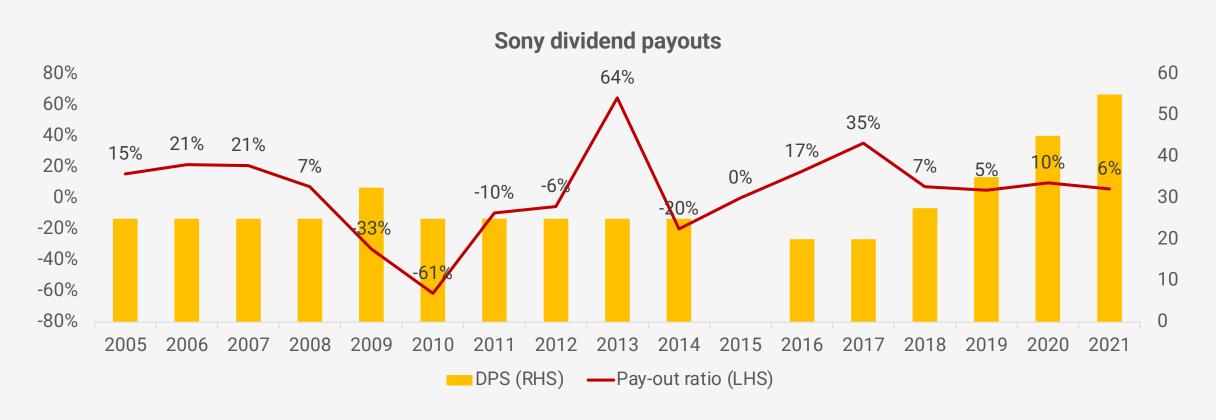
### A sum-of-the-parts valuation of Sony would provide upside even at a 25% conglomerate discount. Some argue that 0% discount is more appropriate.



Sum-of-the-parts (Sony Corporation)	<u>EBIT</u>	<u>Multiple</u>	<u>Value to Sony</u>
Games	663	14.0x	9,282
Music	274	17.5x	4,795
Pictures	241	15.0x	3,615
Electronics	103	12.0x	1,236
Image sensors	310	12.0x	3,720
Other	-115	10.0x	-1,150
Gross value ex-Sony Financial			<u>21,498</u>
Net debt			-1,302
Sony Financial			1,130
Other equity holdings			1,404
Net asset value			22,730
Discount			25%
Intrinsic value			17,048
Shares outstanding			1,237
Intrinsic value/share			13,781
Latest share price			11,375

# Sony has never been a big dividend payer, and has had a median payout ratio of just 7%





#### Potential downside risks



- Destructive competition? Microsoft has shown itself willing to sell consoles at a loss to gain Game Pass subscribers. Sony's 30% take rate for in-network game purchases might be at risk, since Microsoft is rumoured to only charge 5%. Also, Microsoft's Game Pass offers access to first-party new titles similar to Netflix. It remains to be seen whether the streaming model is suitable for games since only a few are purchased each year. Microsoft's acquisition of Activision could also be a threat. But Activision titles will probably remain non-exclusive given how important PlayStation is to sales.
- Customer concentration: Customer concentration in the image sensor segment, where Apple represents roughly 50% of revenues. It's possible that Apple might one day diversify among its suppliers, and perhaps add a Chinese supplier for image sensors (Will Semiconductor?)
- Venture capital bust: Is it possible that some of the spending on music and videos has been financed by an irrational venture capital boom?



#### Catalysts



- Supply chain problems easing
- Greater sales of the PlayStation 5 platform
- Individual game releases such as GTA 5 and God of War
- Netflix & Disney revenues kicking in for Sony Pictures



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