



# GAMECO MARKETING BUDGET PLANNING FOR 2017

*Submission for the Task 1.10  
“Storytelling with Data”,  
Intro to Data Analytics*

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## STEP 1

The GameCO's executive board is planning the marketing budget for 2017. The assumption is that the sales for the various geographic regions (namely: North America, Europe, Japan, and the rest of the World, here also named "Others") remained the same as in the past years.

I chose to compare the trends for the previous 10 years (2006-2016) in terms of global sales, percentage of global sales, sales by genre, and sales by platform for each region. The 10 years period offers enough data points to enable a trend to be observed, also, looking back only 10 years ensures that most of the platforms sold at the beginning of the period still have games being published for them, and we are not considering platforms that are already out of the current market.

Taking into consideration the total regional sales, regional sales by genre and by platform should provide enough information to the executive board to be able to best allocate the marketing resources for 2017.

### 1.1 Regional total sales

From Task 1.5 I observed that the global sales peaked in 2008 and then started decreasing, therefore the assumption of the executive board is incorrect. The regional sales trends are shown in Figure 1.

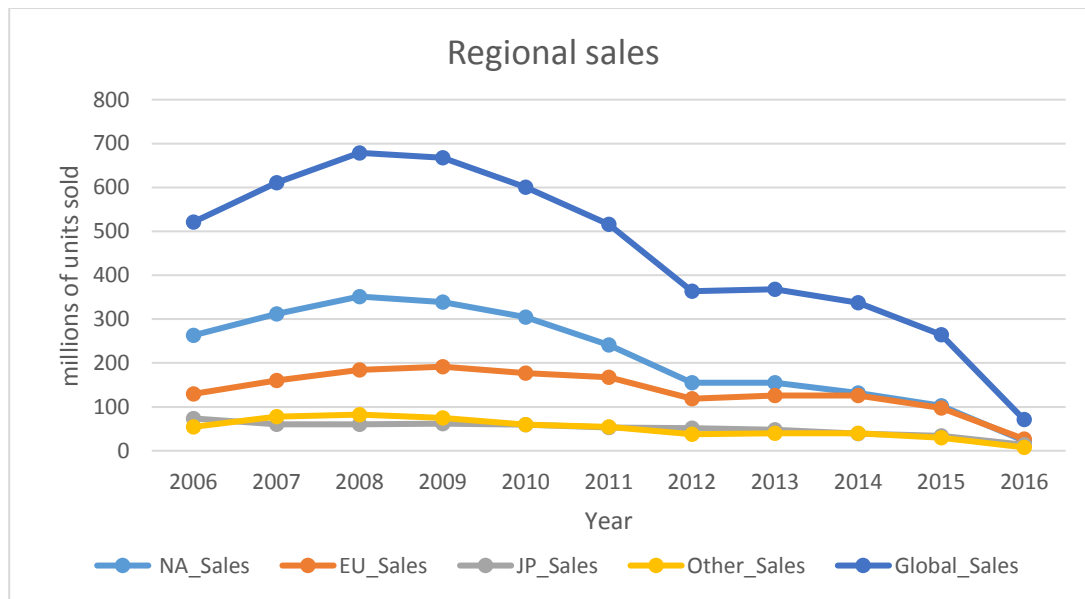


Figure 1 Absolute number of units sold in each region and globally

All regions sales decreased substantially, with the North American market suffering the most, losing 71% of its sales, while the European market suffered the least, losing 49% of sales. Data are resumed in Table 1.

Region	Variation 2006/2015 (millions of units sold)	Variation %
North America	-248.62	-71%
Europe	-93.88	-49%
Japan	-40.01	-54%
Other	-52.38	-64%
<b>GLOBAL</b>	<b>-414.46</b>	<b>-61%</b>

Table 1

The proportion of the each region market sales relative to the global sales is reported in Figure 2. We can see that the European Market gained shares at the expense of the North American market. It is also worth noting that the Japanese market saw an increase in market share in the past year (2016).

The total variation in percentage for each region is shown in Table 2.

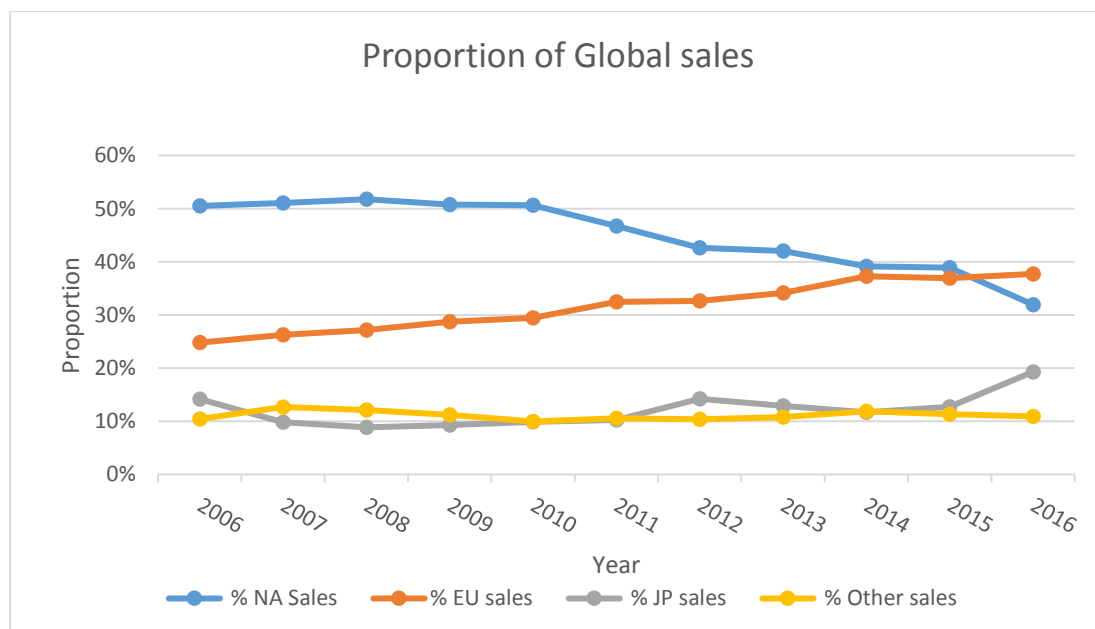


Figure 2 Proportion of the sale market taken by each region

The yearly variation in percentage for the last 9 years for each region is shown in Figure 3. The data have been calculated as the difference in percentage between two consecutive years for each region (starting the time frame in 2006 means that the first point is relative to 2007).

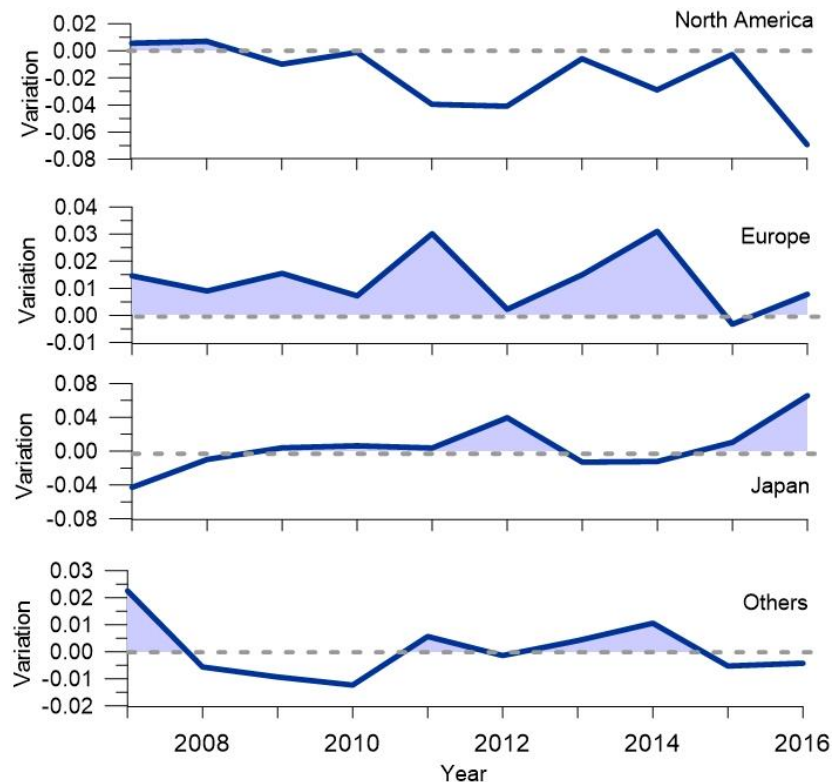


Figure 3 Year variation in % for each region. Shaded blue areas represent periods of positive growth

We can see that Europe is the only region which had a positive growth in almost every year since 2007.

## 1.2 Regional trends by game genre

As discussed in Task 1.5, there is a marked difference in genre preference between the Japanese market and the rest of the World. I summarized the sales figures by genre and expressed the values as a percentage of the total sales (filtering out the years before 2006) to get a better grasp of the distribution of sales for each genre in each market. These results are shown in Figure 4.

Action games are the most sold games in North America, Europe, and the rest of the World, while Role-playing games are the most sold games in Japan. Sport games are the second best-selling genre globally.

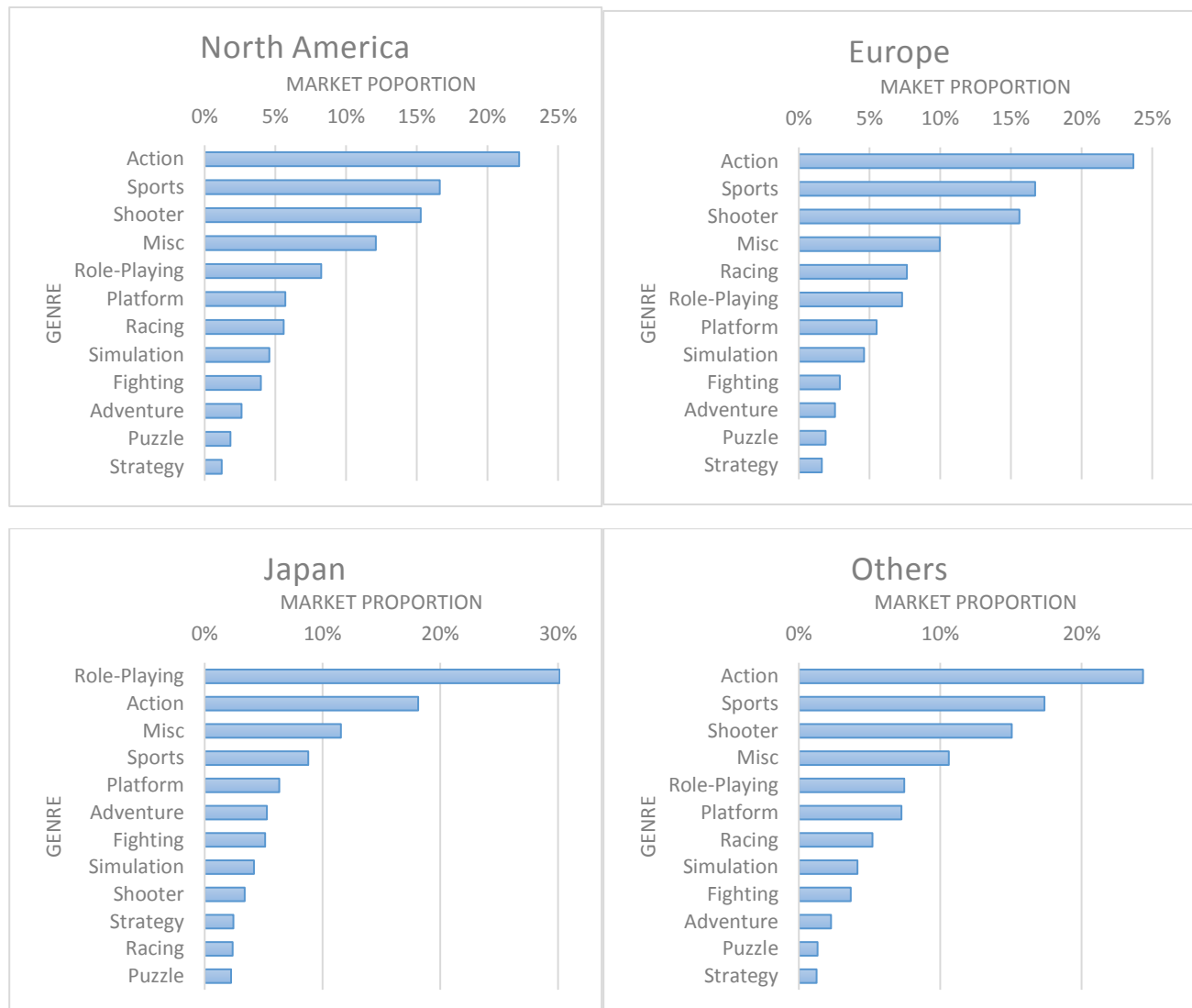


Figure 4 Bar Charts representing the market proportion of each genre in the different regional markets

The yearly sales for each top-selling genre in each region is shown in figure 5. The sales are declining since 2008, as expected giving the global downtrend in sales.

In order to see the evolution in behavior of the top-selling genres in each market without the masking effect of the global declining trend, I calculated the proportion of the genre's sales with respect to the total sales. The results are shown in Figure 6. It can be clearly seen that the top-selling genre is overall increasing its market share in each region. The vertical axis is truncated at 60% for better clarity. Values for the North America, European, and the rest of the World are 100% for 2016, most probably because of incompleteness in the database for this year (it appears that only action games have been recorded).

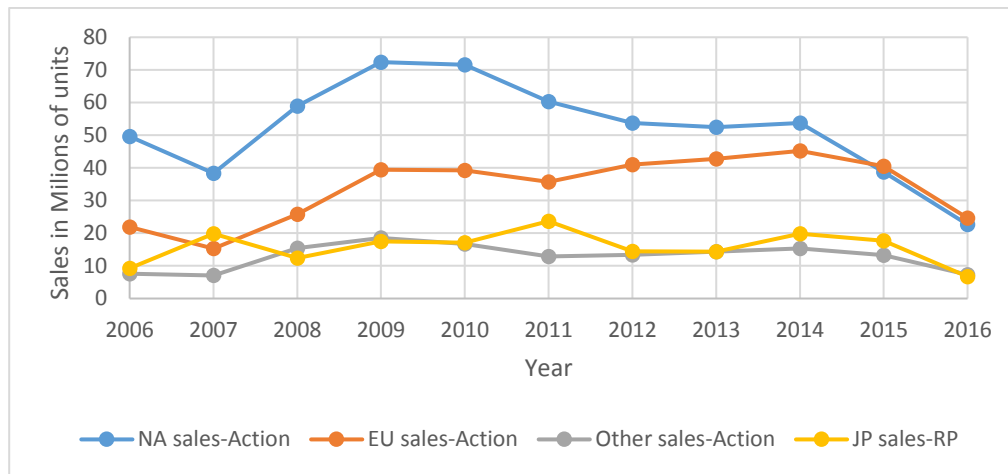


Figure 5 units sold in each region for its respective top-selling genre

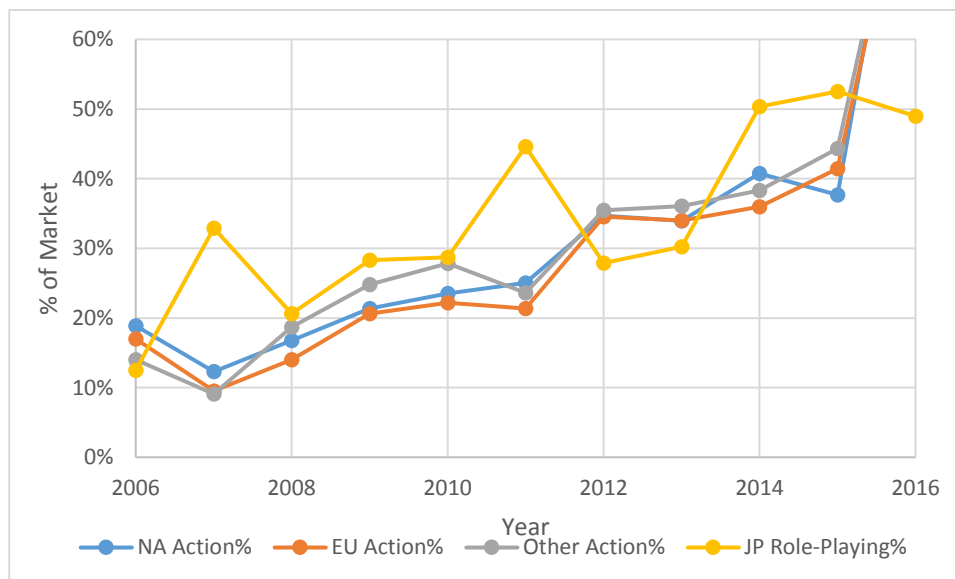


Figure 6 Yearly variation of percentage of market for each top-selling genre in each region

The total variation in percentage is reported in Table 2.

Region	Variation %
North America	19%
Europe	24%
Japan	40%
Others	30%

Table 2

The absolute number of sales of each genre depends, among other things, on the number of games of this genre released, i.e. we can expect that a high number of games would translate in a high number of total sales. To test this assumption, I divided the sales for the genres by the number of games released in any specific year. The results are shown in figure 7 (for clarity of visualization, only the top 5 genres are shown).

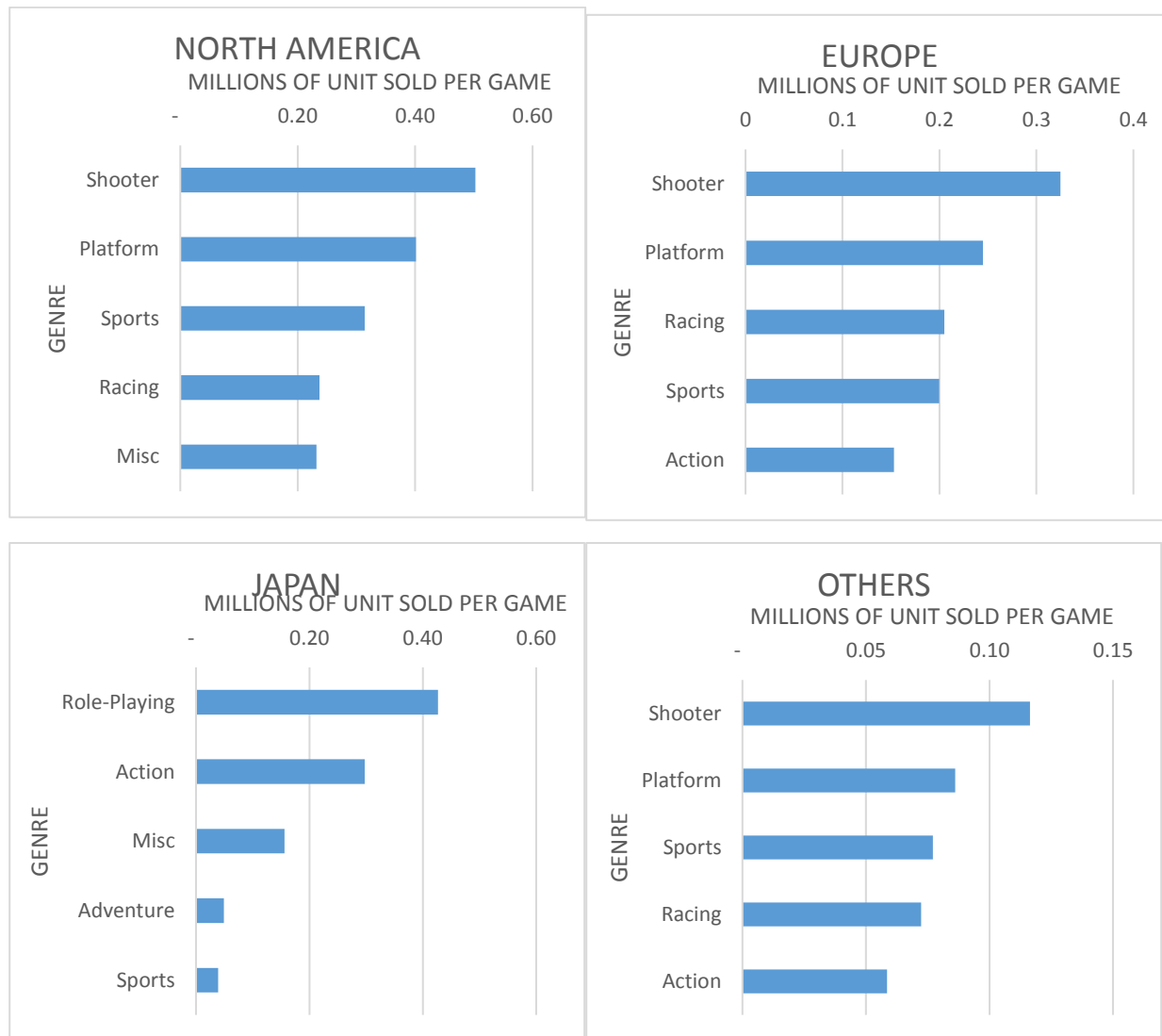


Figure 7 Bar chart of average sales by genre in each market

I defined the genre with the highest “sales/published games” ratio as the “most successful genre”. I then compared the average sales by year of the most successful genres with the best-selling genres (as seen previously in Figure 5). The results are shown in Figure 8. The Data show that in the North American, European, and Others markets, Shooter games sales have increased by 18% on average each year, while Action games only gained 3% on average in the same period.



The fact that the best-selling genres are not the most successful in terms of average sales per game means that the marketing strategy is best to be tuned according to the most successful genres. In this way, the same amount of money can be allocated to a smaller number of games, and still expecting the same total return.

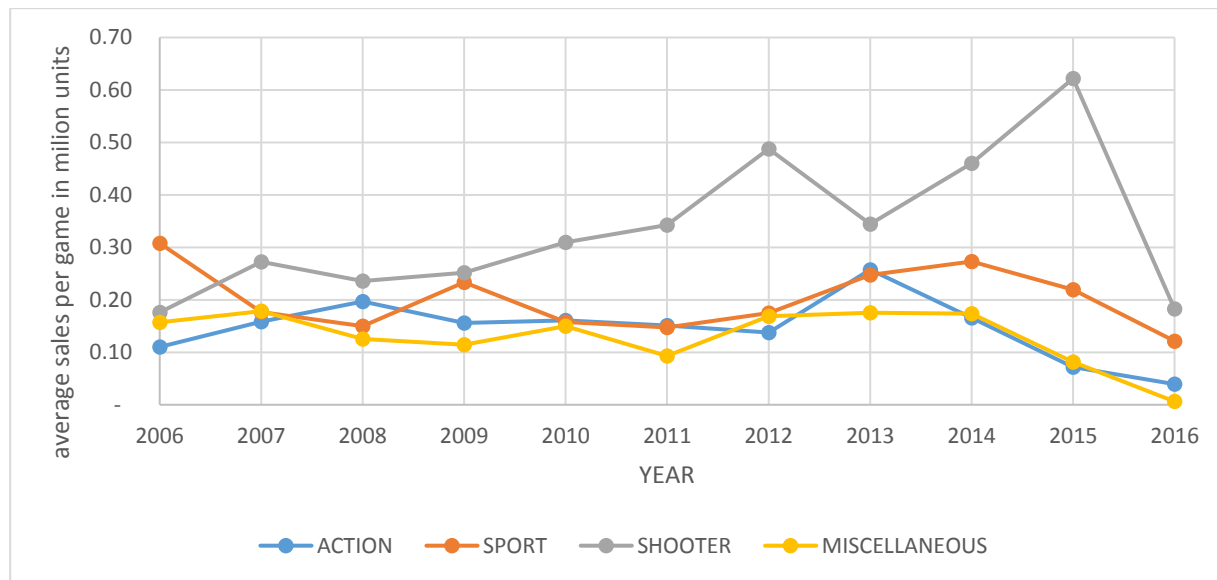


Figure 8 Average sales by selected genres in NA, EU, and Others markets

### 1.3 Regional sales by platform

In Task 1.5 I observed substantial differences in the sale performances of platform across the different market. I used a pivot table to summarize the data p by platform, and filtering out data relative to the years prior to 2011. This choice of years was based on the years when the latest generation of consoles were launched on the market; these are supposedly the leading platforms now in terms of sales. I then compared the sales of each platform in each market. The results are shown in Figure 9. The Japanese market is dominated by games for Nintendo 3DS, while the rest of the World's market is dominated By Playstation4 and Playstation3 games.

Following the same line of thought as in paragraph 1.2, I calculated the average sale per game for each platform, by dividing the total sales for the number of games released for each platform for each year. These results are shown in Figure 10. This time, the top-selling platform in each market is also the most successful.

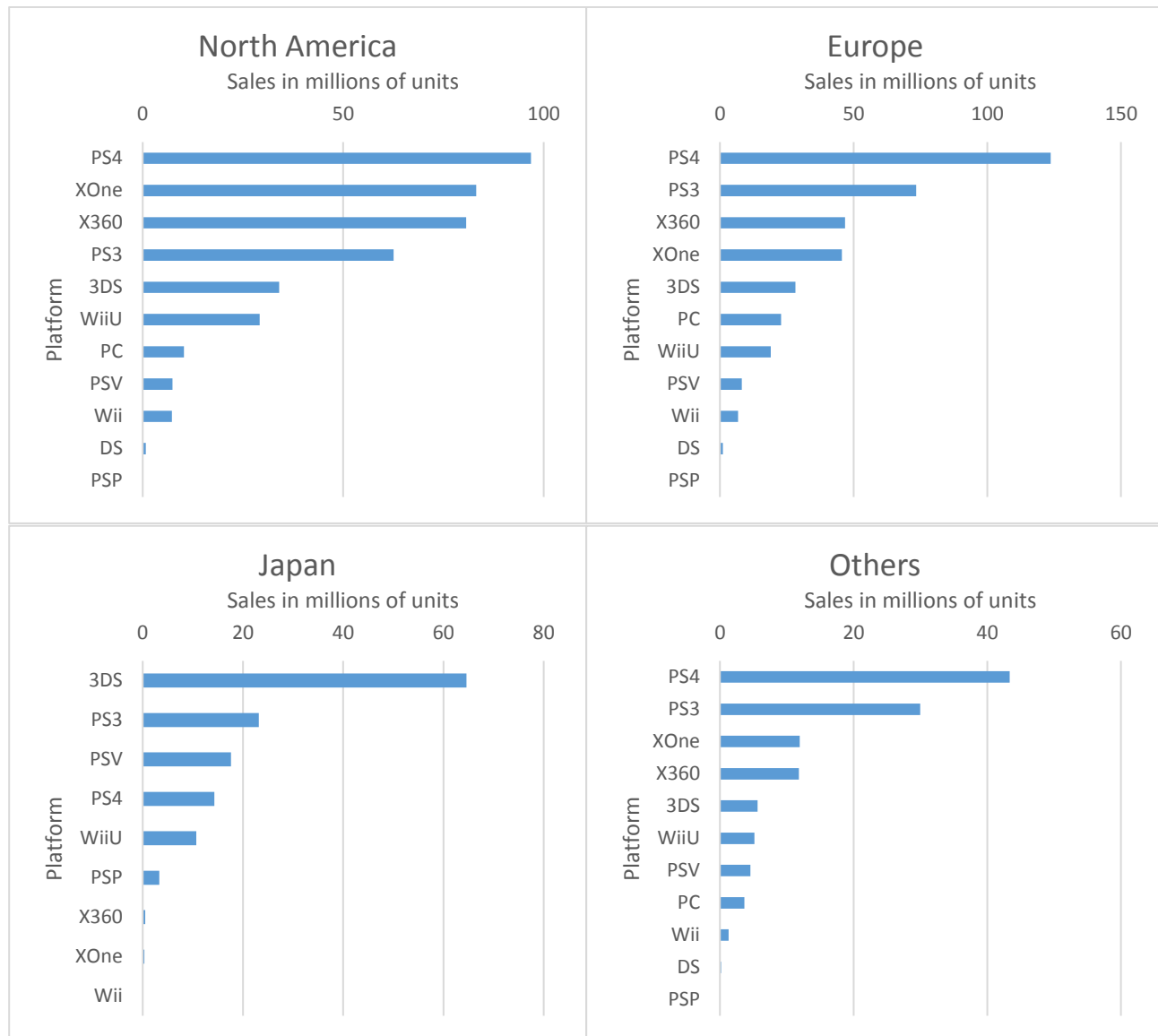


Figure 9 Bar charts representing the total sales for each platform in each market.

I plotted the yearly sales for the best-performing platforms in every region to look for trends. This is shown in figure 11. We can see that the Playstation4 sales in general follow a steeper upward curve than the Nintendo 3DS. The fact that both platform's sales are decreasing is a possible signal of product aging, i.e., the market might be ready for the release of the next generation of consoles.

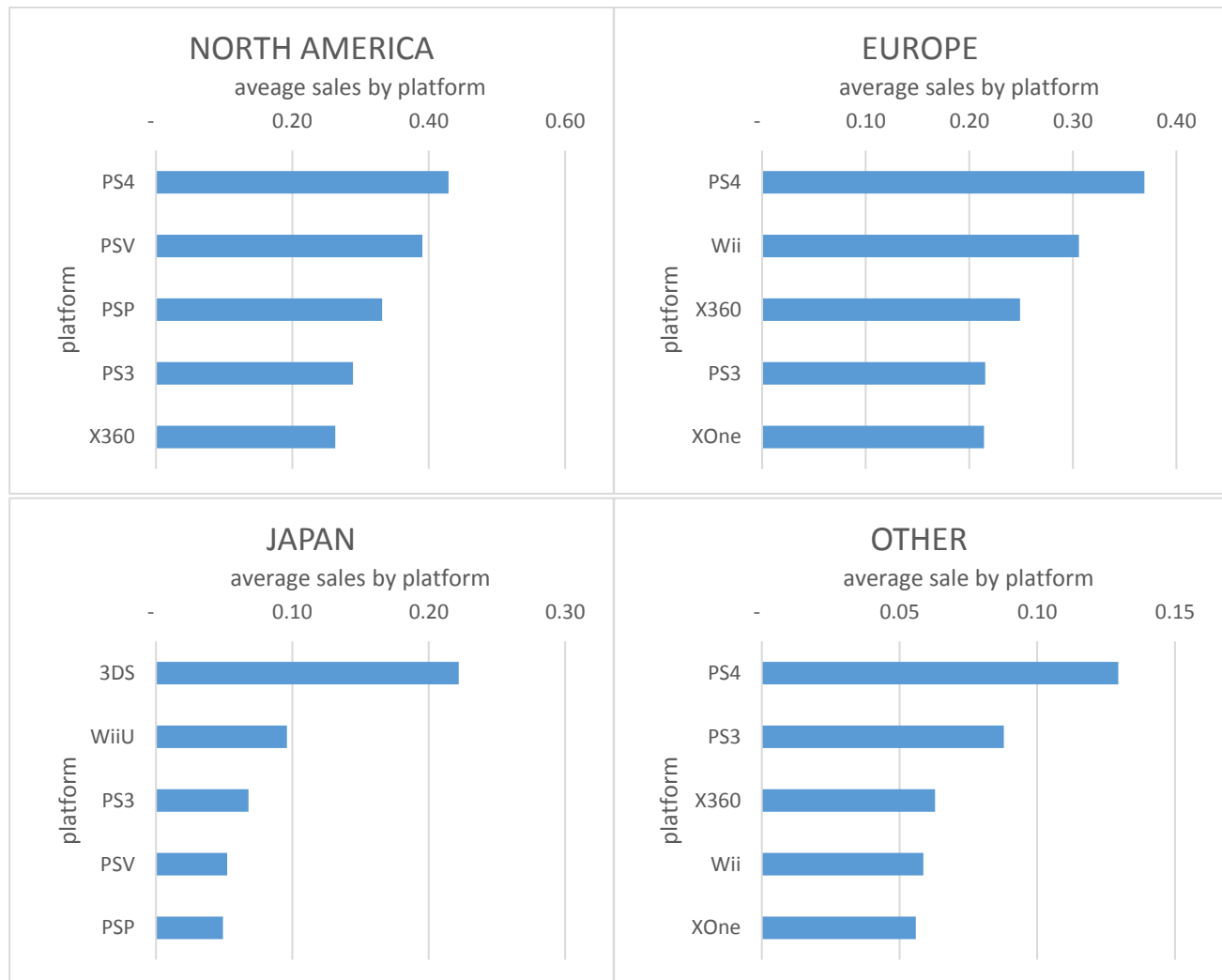


Figure 10 Bar charts of the average sale by platform.

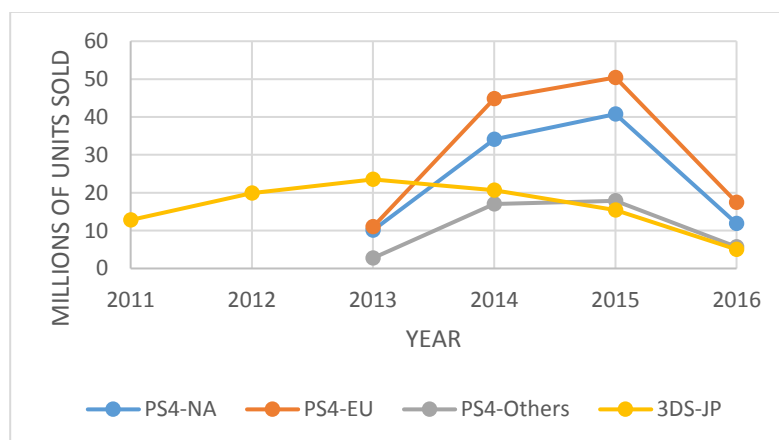


Figure 11 Sales trends for the best-performing platforms in different markets.

## STEP 4

In the presentation, I chose to include several of the charts shown in this report. The presentation follows the same organization of this report, namely, an introductory part, visualization of global and regional total sales trends, genre-specific sales, and platform-specific sales. Each section contains at least two charts, marketing recommendations, and, when felt necessary, a few comments on the charts. The presentation ends with some final remarks, summarizing the findings and recommendations.

Here are given the reasons behind the choice of which chart was chosen to be used, and how each one contribute to the building of the insights.

### ***Part 1: Global and regional sales trends***

Color-coding in the charts has been made to represent with consistency the same region.

- Figure 1: it has been included, as it immediately show the global and regional trends along the years, directly disproving the executive board's assumption of market stability.
- Figure 2: it has been included, as it is useful to see variation in trends in the different regions. This was the basis to formulate marketing recommendations on how to invest in different regions.
- Figure 3: this figure was excluded from the presentation, as it didn't add any novel information to the presentation.

### ***Part 2: Regional trends by game genre***

Here I chose to show the insights relative to one specific metric: what I have defined as "most successful" genre, therefore, the part relative to the analysis of genre-specific total sales have been excluded from the charts, only present in comments.

Color-coding in the charts has been made to represent with consistency the same genre among different charts.

- Figure 4: this figure was excluded because it was part of the preliminary analysis of genre sales, and doesn't add any information to the final insight.
- Figure 5: this figure was excluded because it was part of the preliminary analysis of genre sales, and doesn't add any information to the final insight.
- Figure 6: this figure was excluded because it was part of the preliminary analysis of genre sales, and doesn't add any information to the final insight.
- Figure 7: this figure has been included as it shows the classification of the "most successful" genres in different markets, based on the metric I have defined in subchapter 1.2. for ease of visualization, only the top 5 genres are shown.
- Figure 8: this figure has been included as it shows market trends for most successful games, helping to choose on which genres concentrate the marketing efforts.

### ***Part 3: Regional sales by platform***

As for Part 2, I chose to include only the charts that show the platform sales according to the metric of “most successful” platform.

Color-coding in the charts has been made to represent with consistency the same platform among different charts.

- Figure 9: This figure was excluded because it was part of a preliminary analysis, and doesn't follow the “most successful” platform metric
- Figure10: This figure has been included as it classifies the platform based on the “most-successful” metric. For ease of visualization, only the top 5 platforms are shown.
- Figure 11: this figure has been included as it shows sales trends of the “most successful” platforms, helping to choose on which platform concentrate the marketing efforts. The final figure only show one curve for the Playstation4, calculated as the average between North America, Europe, and the rest of the World sales.

I consider that the figures that I chose to include in the presentation convey with efficacy the various market trends, will help the executive board to refine their assumptions, and formulate a more effective marketing strategy for 2017.