Financial Accounting – Roche

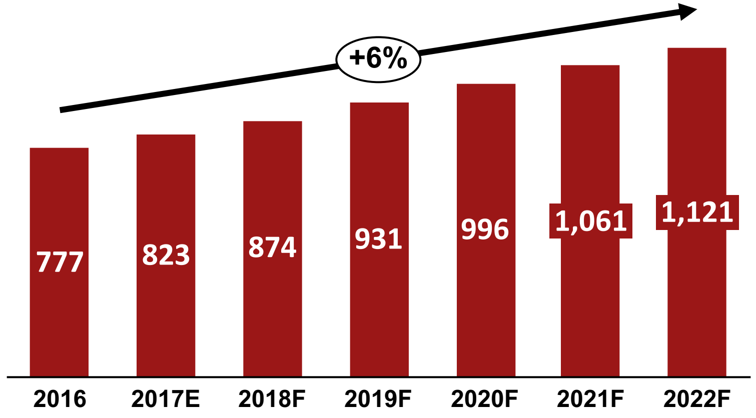
Team 34

The pharmaceutical industry is a fast growing industry that has several barriers to entry

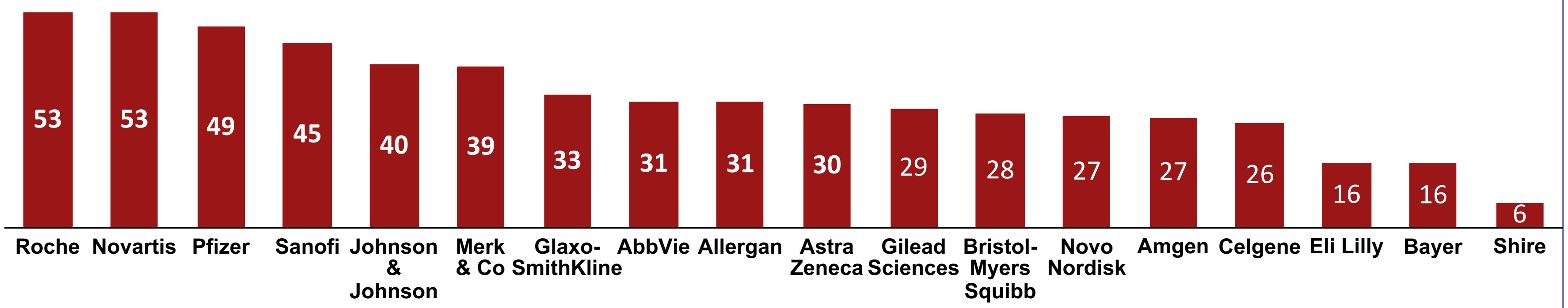
Industry overview

- The pharmaceutical industry is comprised of **companies engaged in researching, developing, manufacturing and distributing** drugs for human or veterinary use
- **R&D Process:**
  - **10-15 years**
  - **USD 2.6 Bn**
- Pharmaceutical companies are usually considered high risk investments due to the heavy dependence on R&D, patents, and FDA approval

Global Prescription Drug Sales (USD bn)



Top Pharmaceutical Companies (forecasted revenue in USD bn, 2022)



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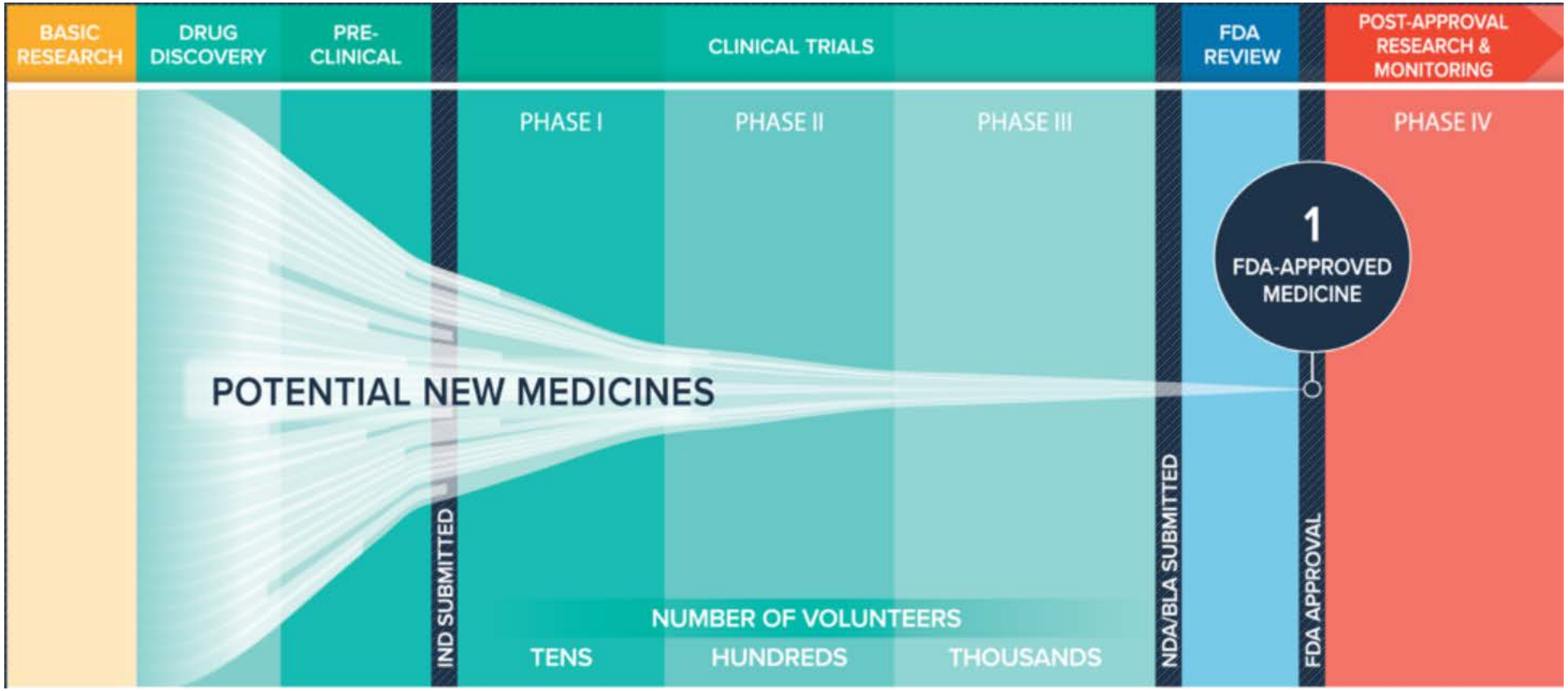
Source: International Trade Administration, EvaluatePharma

Pharmaceutical Industry Competition

- The largest pharmaceutical companies account for a vast majority of revenue in the industry
- When a new drug is released, a company has exclusive rights to sell that drug for the length of their patent
- This leads firms to invest heavily in either R&D or in M&A to acquire new drugs
- The enormous R&D budgets that established firms already have give them a competitive advantage over upstarts, as R&D benefits from economies of scale and economies of scope

The competitive advantage of pharma companies lies in the launch of breakthrough medicines, biologics, and molecules



1 in 1,000 molecules entering preclinical trials proceed to clinical trials

Approximately 20% of investigative medicines entering clinical trials are ultimately approved by the FDA

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Source: EvaluatePharma

Roche and Novartis overview

Roche

- Swiss multinational pharmaceutical company specializing in innovative cancer medicines, among many others
- Roche sales in 2016: USD 51.38 bn
- Controls the American biotechnology company Genentech, the Japanese biotechnology firm Chugai Pharmaceuticals, and US-based Ventana
- Roche has two divisions: Diagnostics and Pharmaceuticals
- R&D
    - 11,532M CHF (11,715M USD)
    - 22.8% of sales
    - 1st in the industry
- Many patents expire in the next 3 years

NOVARTIS

- Novartis is a Swiss multinational pharmaceutical company formed from the merger of the generic giant Sandoz and Ciba-Geigy, one of the oldest drug manufacturers
- Novartis sales in 2016: USD 48.5 bn
- Acquired global eye care leader Alcon in 2010, as well as skin care firm Fougera Pharmaceuticals in 2012
- R&D
    - 9,039M USD
    - 18.63% of sales
    - 3rd in the industry
- Many strategic investments, including a nearly 1/3 stake in Roche and GSK Consumer Healthcare

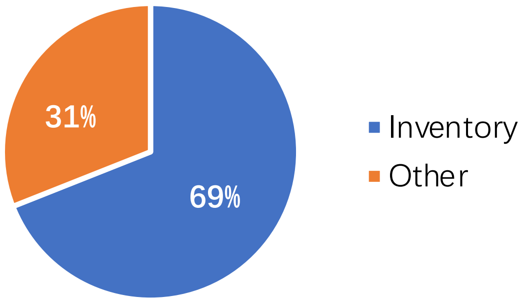
Source: Roche and Novartis websites

Financial Ratio Analysis – Income Statement

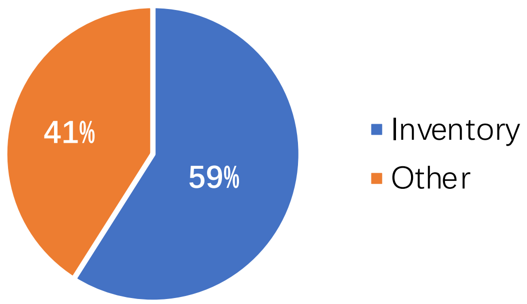
Vertical analysis (% of Sales)

	Roche	Novartis
Sales	100%	100%
Gross Profit Margin	72.1%	65.8%
Operating Profit	28.7%	17.0%
Net Income	18.8%	13.8%
Net Income attributable to Shareholders	18.4%	13.8%

Roche



NOVARTIS



Financial Ratio Analysis – Inventory Turnover

Inventories

Weighted Avg. Method

"Cost is determined using the weighted average method."

FIFO

"Inventory is valued at acquisition or production cost determined on a first-in first-out basis."

Balance Sheet

Roche

(CHF millions)	2016	2015
Raw materials and supplies	1,194	1,091
Work in process	114	133
Intermediates	5,372	5,458
Finished goods	1,880	1,485
Provision for slow-moving and obsolete inventory	(632)	(519)
Total inventories	7,928	7,648
Inventory Turnover	2.08	2.01
Avg. Inventory days outstanding	176	180

NOVARTIS

(USD millions)	2016	2015	2012-14
Raw material, consumables	705	658	
Work in progress	2 700	2 905	
Finished products	2 850	2 663	
Total inventories	6 255	6 226	
Inventory Turnover	2.81	2.83	2.39
Avg. Inventory days outstanding	130	129	153

Source: Roche Financial Statements

Financial Ratio Analysis – Income Statement

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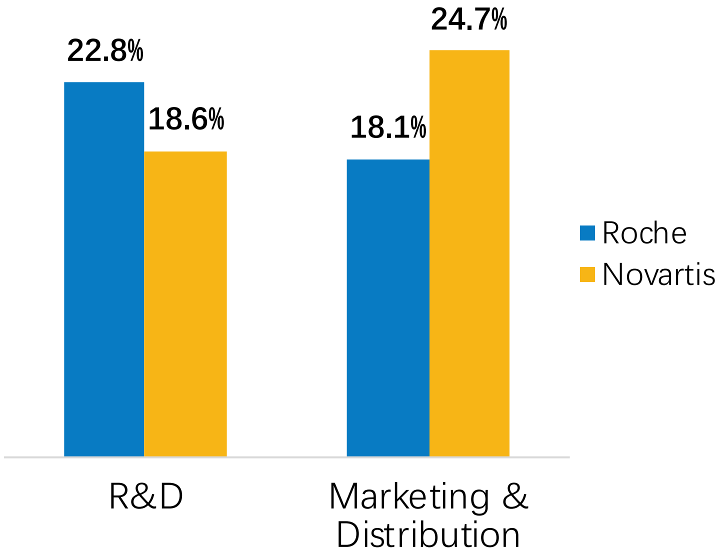
Most relevant expenses



Development and launch of new products

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Industry comparison

- **Lower margin than the industry**

Industry	Net Margin in 2016
Pharma: Generic	30%
Investment Managers	29.1%
Tobacco	27.2%
Pharma:major	25.5%
Internet Software/Services	25%
Biotechnology	24.6%
Savings Banks	24%
IT Services	23%
Regional Banks	23%
Major Banks	22.9%

Source: https://finance.yahoo.com/news/most-profitable-industries-2016-161900896.html

Financial Ratio Analysis – Income Statement

Horizontal analysis (% of change over yrs)

Roche

Roche	
Gross profit from continuing operations ⬆	**4.33%**
Sales ⬆	5.05%
Cost of Sales ⬆	4.66%
Operating income from continuing operations ⬆	**1.79%**
Research & Development ⬆	20.36%
General & Administration ⬇	-37.11%
Income before taxes from continuing operations ⬆	**8.51%**
Financing costs ⬇	-30.18%
Other financial income (expense) ⬇	-114.23%
Net Income ⬆	**7.48%**
Tax ⬆	11.70%

NOVARTIS

Novartis	
Gross profit from continuing operations ⬇	**-3.23%**
Sales ⬇	-1.86%
Cost of Sales ⬆	0.67%
Operating income from continuing operations ⬇	**-7.90%**
General & Administration ⬇	-11.35%
Other expense ⬇	-18.41%
Income before taxes from continuing operations ⬇	**-3.90%**
Income from associated companies ⬆	164.29%
Net Income from continuing operations ⬇	**-4.70%**
Net Income ⬇	**-62.36%**
Net income from discontinued operations ⬇	-100%

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Financial Ratio Analysis – Balance Sheet

Horizontal analysis (% of change over yrs)

Roche

Assets ⬆	**1.39%**
⬆Cash	11.58%
⬆Other non-current assets	16.78%
⬇Intangible assets	-13.09%
Liabilities ⬇	**3.90%**
⬇Financial debts	-12.81%
Equity ⬆	**13.31%**
⬆Capital attributable to shareholders	

Mainly due to the decrease in General Adm. Expenses (-37 %) and an increase in Sales (5%) that led to an increase in retained earnings

NOVARTIS

Assets ⬇	**1.09%**
⬆Cash	49.91%
⬆Other non-current assets	16.14%
⬆Deferred tax	12.02%
⬇Financial assets	-10.95%
Liabilities ⬆	**1.47%**
⬇Account payables	-14.03%
Equity ⬇	**-2.89%**

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Financial Ratio Analysis - ROFL

ROE − ROA = ROFL

The financial leverages for both companies are working to the advantage of the companies' shareholders, but the effects are decreasing in 2016, especially for Novartis

	ROE 2015	ROE change	ROE 2016	ROA 2015	ROA change	ROA 2016	ROFL 2015	ROFL change	ROFL 2016
Roche	40.38%	-3.00%	39.17%	12.84%	4.69%	13.44%	27.54%	- 6.59%	25.72%
NOVARTIS	24.05%	-63.36%	8.81%	14.24%	-61.16%	5.53%	9.81%	-66.55%	3.28%

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Financial Ratio Analysis – Financial Leverage-Roche

Roche

ROE
-3.00%

ROA
+4.69%

ROFL
-6.59%

Profit Margin
+0.54%

Asset Turnover
+4.17

Earnings Without Interest Expense
5.58%

Sales Revenue
5.05%

Average Total Asset
+0.85%

Sales Revenue
5.05%

The change in Asset Turnover is larger than the change in Profit Margin, this implies that the change in ROA is driven by the change in Asset Turnover. The increase in Asset Turnover was mainly caused by the increase in Sales Revenue.

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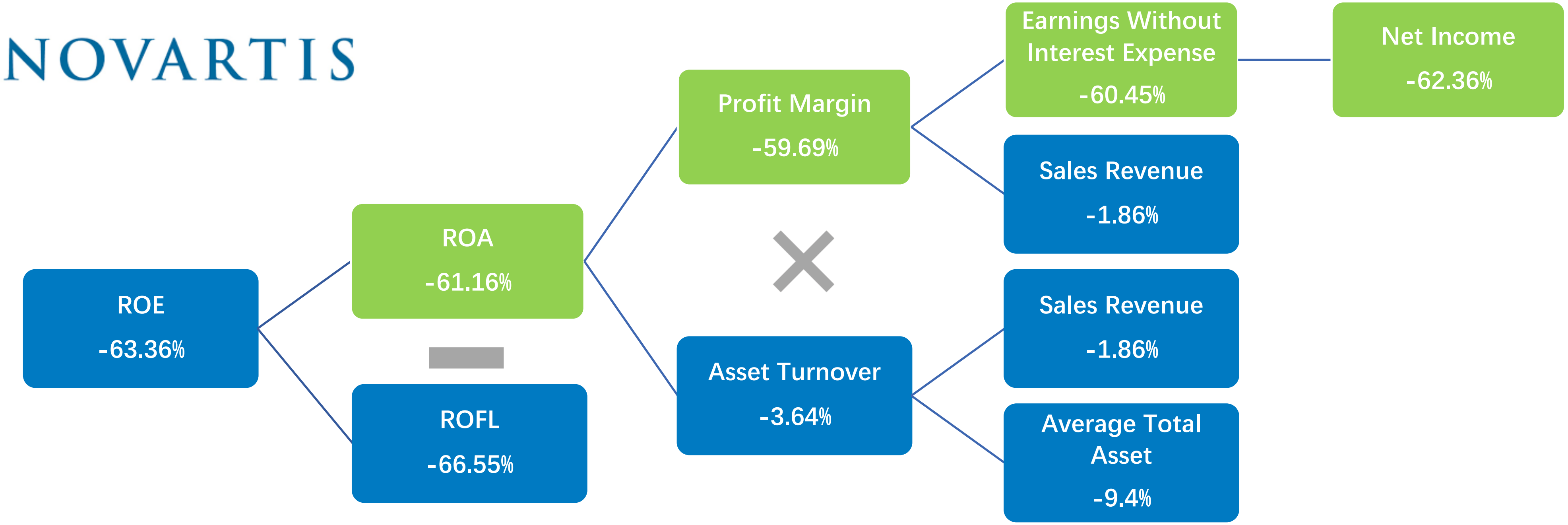
Financial Ratio Analysis – Financial Leverage-Novartis

NOVARTIS



The change in Profit Margin is larger than the change in Asset Turnover, this implies that the change of ROA is driven by the change in Profit Margin.

Novartis was faced with intense competition in 2016. Because of the discontinued operations of the vaccines influenza business, Novartis' Net Income decreased by 62.36%, this caused Earnings Without Interest Expense to decrease by 60.45%.

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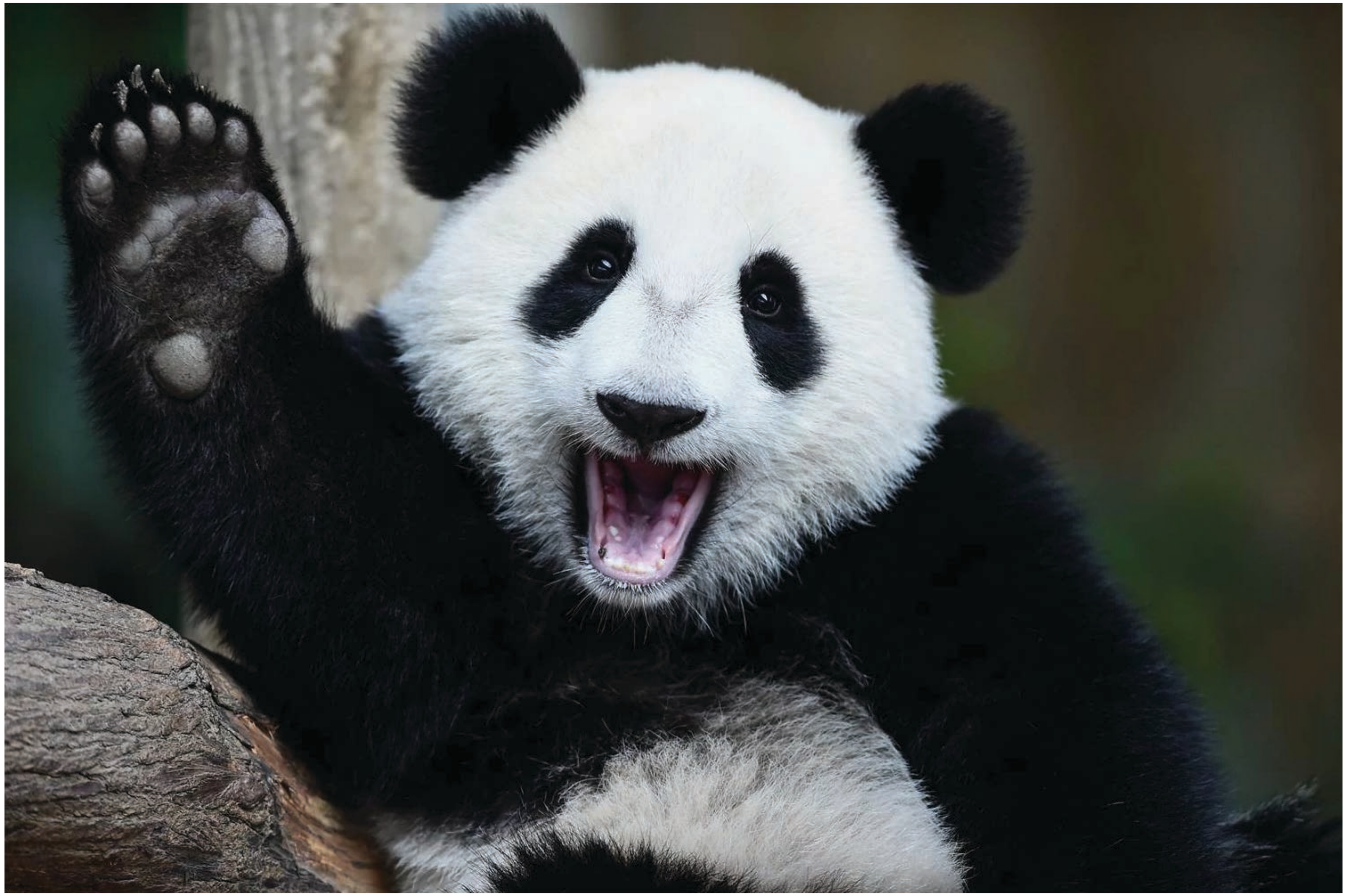
Thank you!



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