

STARTUPS FUNDING ANALYSIS

by Shama Bansal

PROJECT INTRODUCTION

- This project delves into an extensive analysis of global startup funding trends, examining various sectors, funding rounds, geographical regions, and the impact of economic conditions on fundings flows.
- By analyzing historical data across over 100 countries, the project highlights key funding distribution patterns, including trends in early-stage (seed, Series A) and late-stage (Series B, C, etc.) rounds.
- This project aims to help investors make informed decisions, startups plan better funding journeys, and stakeholders capitalize on emerging opportunities in the dynamic startup ecosystem.

OBJECTIVES

Distribution Analysis

- Analyze the distribution of startup funding across various categories, such as industry sectors, markets, and geographical regions.
- Identify sectors with higher investment potential.

Correlation Analysis

- Explore the relationship between funding characteristics (e.g., funding rounds, types of funding, and location) and the success of startups.
- Investigate the impact of geographical location on funding opportunities.

Strategic Recommendations

- Propose strategies for startups to optimize their funding journeys based on insights from the analysis.
- Provide actionable recommendations for aspiring entrepreneurs and investors.

S.

DATASET OVERVIEW

FUNDING VS NON FUNDING

There are 17.24% startups that are either relying on their personal fundings or have closed down due to not getting fundings While 88.76% got fundings for their operations in the dataset

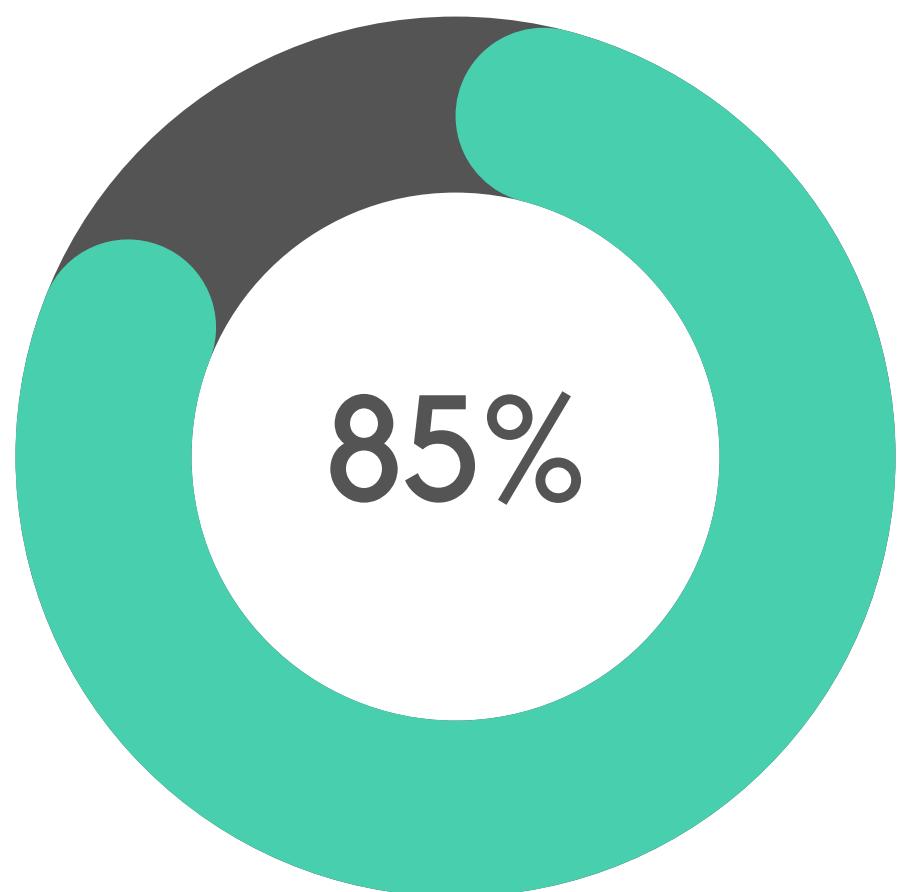
COUNTRY SKEWNESS

The USA has the highest representation in the dataset, almost 58%+, reflecting a strong bias toward American companies. This bias may impact any geographical insights, as trends might not be representative globally.

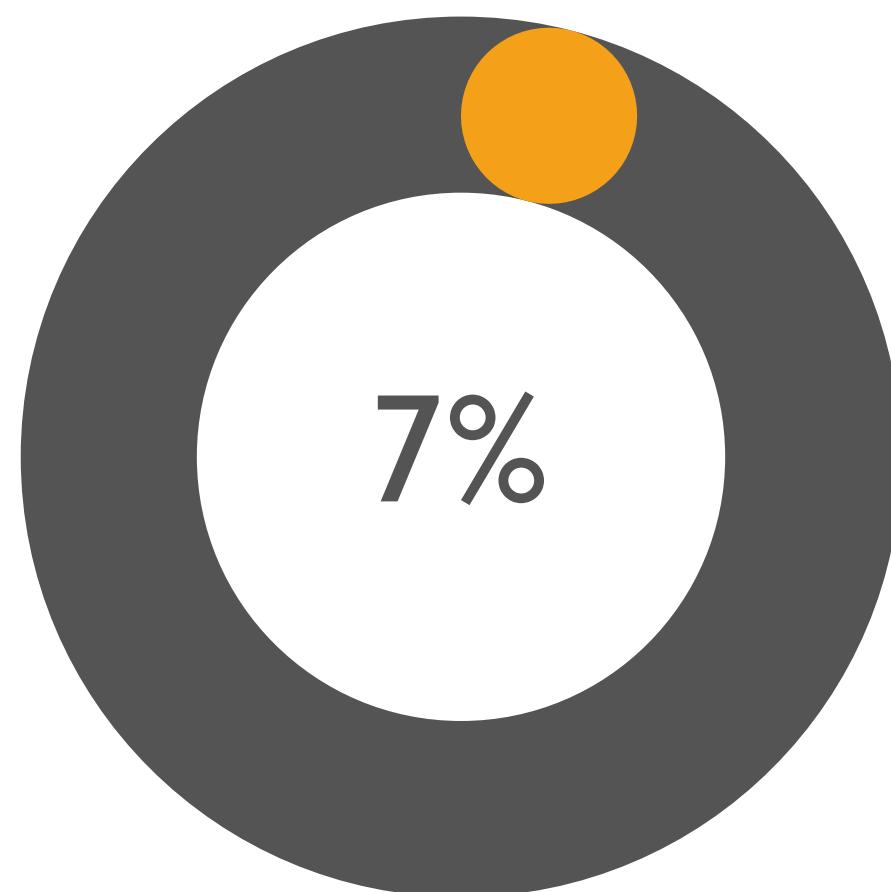
STARTUPS FUNDING TIME

.148 funding years data is there but mostly focused period is 200–2015 as before that startup fundings were very limited

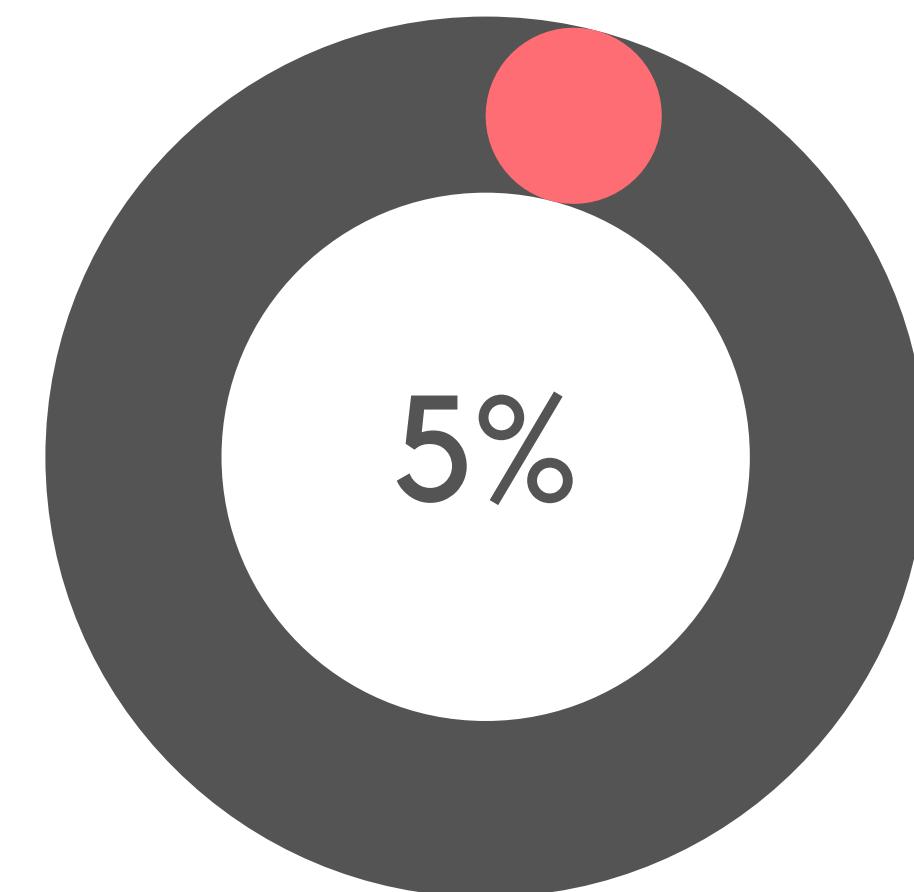
STARTUPS STATUS EVALUATION



OPERATING



ACQUIRED



CLOSED

PROJECT TIMELINE

Funding Rounds

There's a steep drop-off after the first round as 65% startups only went through one round and 18% through two rounds and this trend continues with more rounds. Only 4% goes for four rounds, and it continues to decrease rapidly. This suggests that most startups either struggle to secure additional funding or meet milestones that would justify further investment.

Funding Months

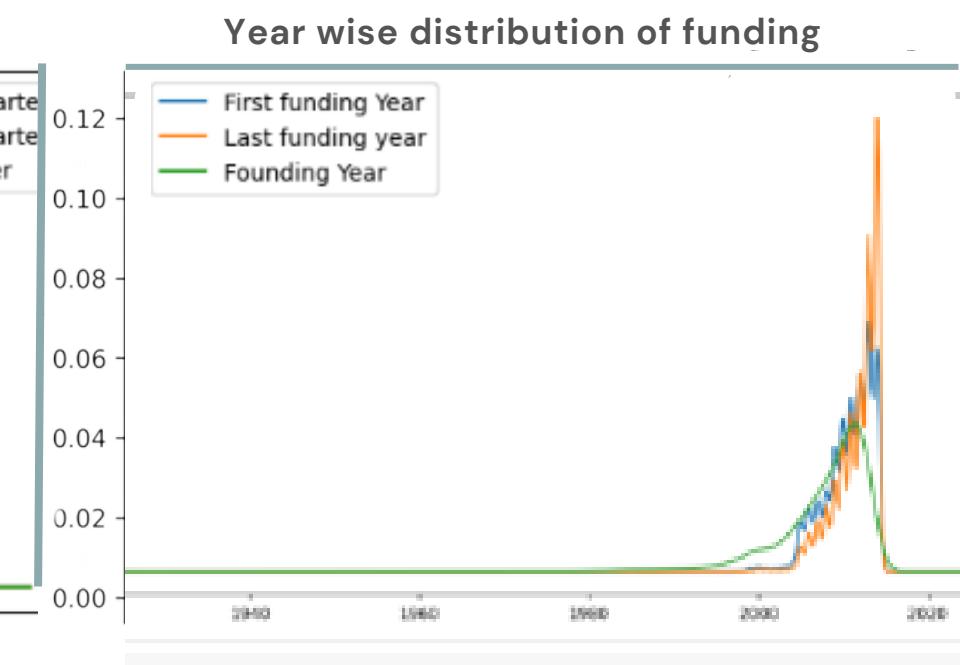
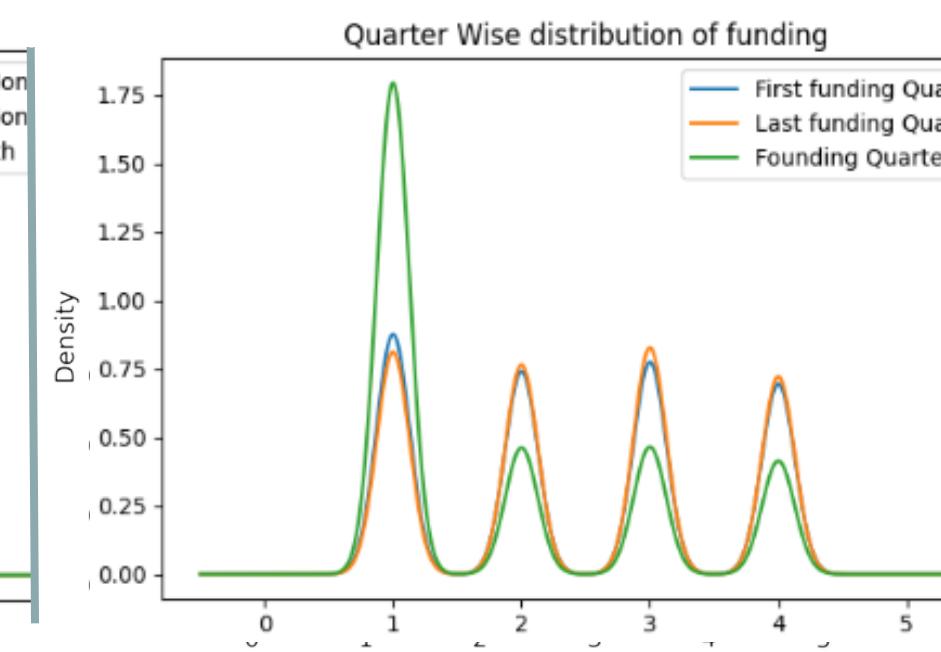
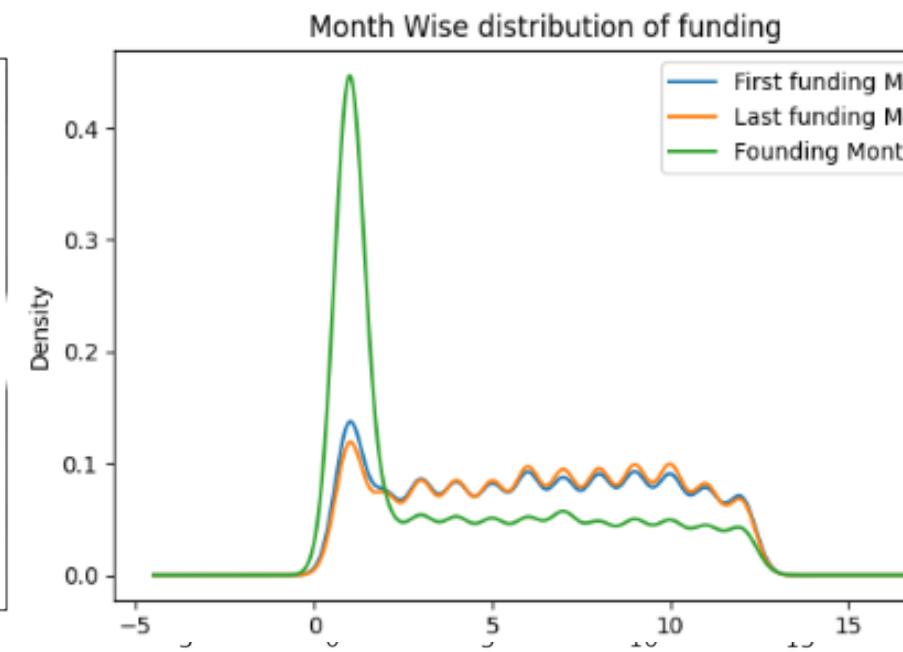
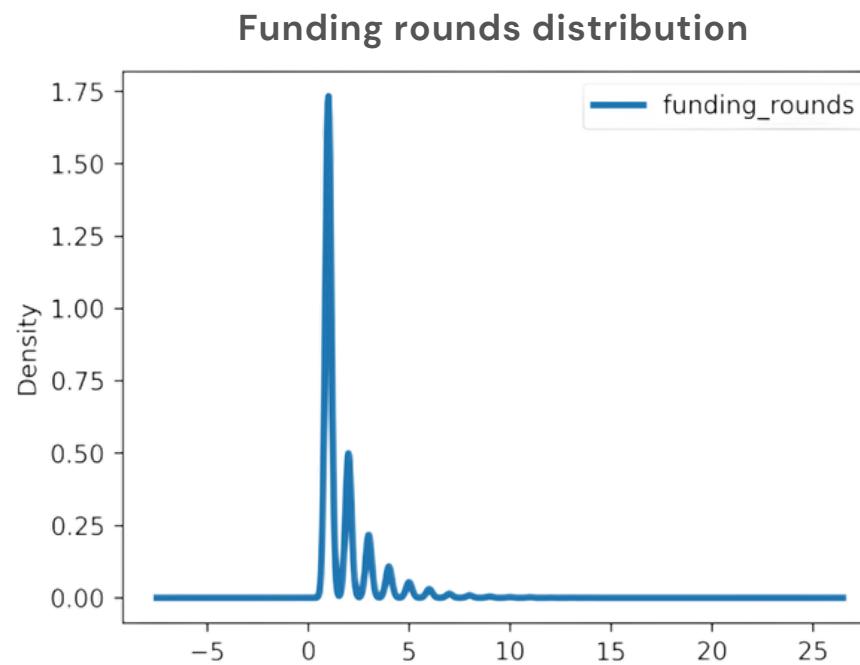
Mostly startups founded in January, almost 50% revealing that many startups tend to commence operations at the beginning of the year, possibly to align with new budgets and planning cycles. The counts for July and March are relatively high, indicating a continued interest in starting new ventures mid-year. But, steady decline is noted in the later months, with December showing the least number of founded startups..

Funding Quarters

Q1 consistently shows the highest counts across all startup metrics, indicating a strong trend for funding and founding in the early part of the year while the counts sharply decline in subsequent quarters, particularly in Q4. The peak for funding occurs in Q3, particularly for final funding rounds, suggesting that many startups are actively closing deals and securing funds by mid-year.

Funding Years

The peak years for first funding are 2013 and 2014. Startups founded around these years appear to have attracted the most funding. These years also see high values for last funding, suggesting an intense funding cycle, with significant follow-up investment occurring soon after initial funding. The rise in startups during 2008-2014 likely correlates with the tech boom.

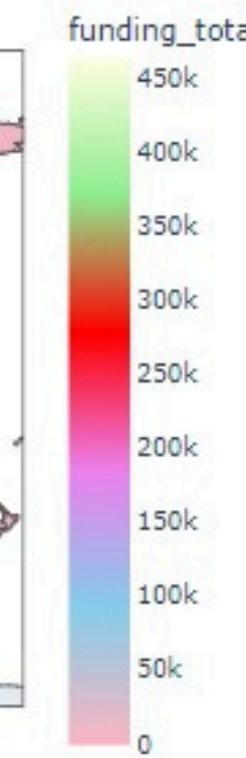
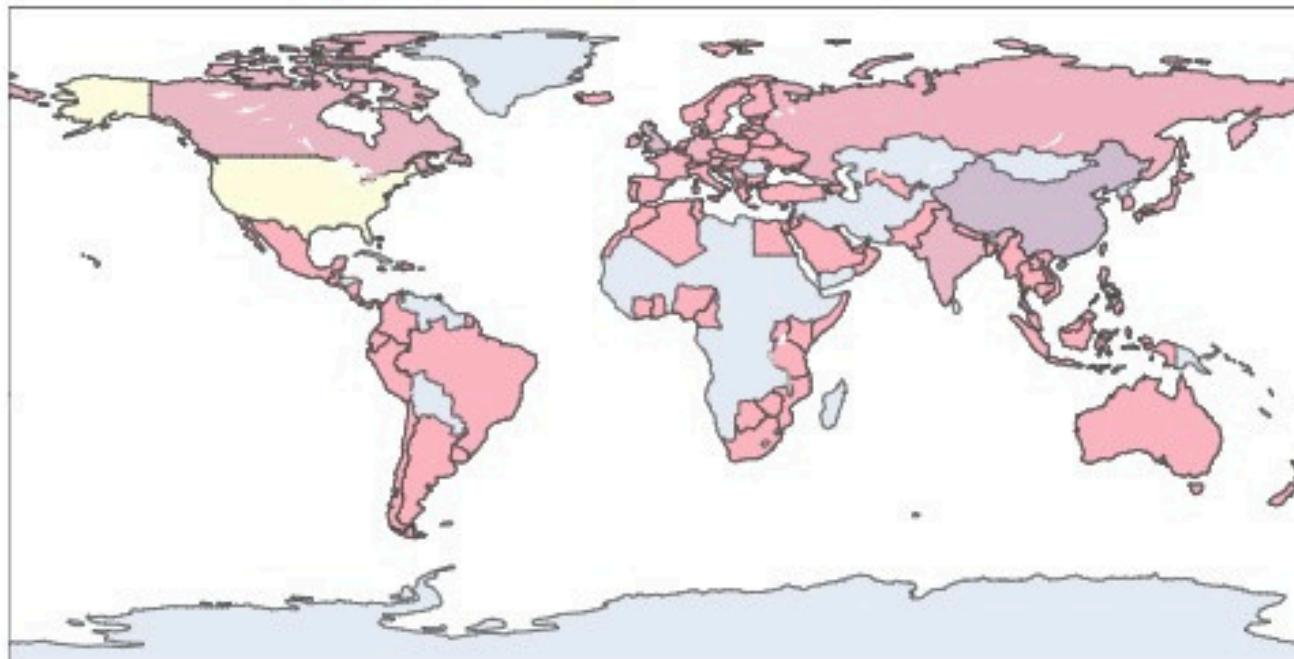


- Funding Total (USD) high correlation with Venture Funding suggests that a significant portion of total funding likely comes from venture funding rounds. Its correlation with later Rounds (A, B, C etc) indicates that companies with higher total funding have more advanced funding rounds.
 - Funding Rounds positive correlation with funding total aligns with the expected pattern where companies with more funding rounds generally accumulate higher funding amounts.
 - Moderate correlations of funding rounds with Rounds A, B, and C shows that these are common in many funding journeys.
 - Negative correlation between Founded Year and Total Funding indicates older companies tend to have higher funding totals than recently founded ones, likely due to more time to accumulate fundings.
 - Seed funding and founded year have moderate correlation which imply that many recently founded startups start with seed funding.
 - It is negatively correlates with Venture, indicating that companies moving beyond early stages depend less on seed funding as they scale to venture and later rounds.
- This analysis reflects the progression of startups from early to advanced stages in their funding cycles, with more established companies generally attracting higher funding through later-stage rounds and venture capital.

	Correlation between funding columns																									
	funding_total_usd	funding_rounds	Founded_month	Founded_quarter	Founded_year	seed	Venture	equity_crowdfunding	undisclosed	convertible_note	debt_financing	angel	grant	private_equity	post_ipo_equity	post_ipo_debt	secondary_market	product_crowdfunding	round_A	round_B	round_C	round_D	round_E	round_F	round_G	round_H
_total_usd	1	0.51	-0.19	-0.16	-0.37	-0.07	0.79	-0.06	0.04	0.02	0.21	0.01	0.03	0.2	0.1	0.05	0.03	0.01	0.44	0.44	0.34	0.24	0.16	0.09	0.04	0.01
rounds	0.51	1	-0.09	-0.08	-0.19	0.1	0.47	-0.04	0.04	0.08	0.28	0.11	0.06	0.09	0.04	0.02	0.02	0.01	0.35	0.42	0.34	0.25	0.16	0.1	0.04	0.01
month	-0.19	-0.09	1	0.95	0.21	0.08	-0.18	0.05	0.01	-0	-0.1	0.08	0	-0.06	-0.01	-0.02	0	0	-0.04	-0.09	-0.08	-0.06	-0.04	-0.03	-0.01	0
quarter	-0.16	-0.08	0.95	1	0.16	0.06	-0.15	0.04	0.01	-0	-0.09	0.07	0	-0.05	-0.01	-0.01	-0	0	-0.03	-0.08	-0.07	-0.05	-0.04	-0.02	-0.01	0
year	-0.37	-0.19	0.21	0.16	1	0.32	-0.41	0.1	0.01	0.04	-0.13	0.06	-0	-0.09	-0.03	-0.02	-0.01	0.05	-0.13	-0.22	-0.21	-0.16	-0.11	-0.07	-0.03	-0.01
seed	-0.07	0.1	0.08	0.06	0.32	1	-0.32	-0.05	-0.05	-0	-0.11	0	-0.03	-0.08	-0.04	-0.02	-0	0.01	-0.09	-0.13	-0.11	-0.08	-0.05	-0.03	-0.01	-0.01
Venture	0.79	0.47	-0.18	-0.15	-0.41	-0.32	1	-0.08	-0.06	-0.02	0.09	-0.12	-0.07	-0	-0	-0.01	0.01	0.04	0.54	0.5	0.39	0.27	0.17	0.1	0.05	0.02
equity_crowdfunding	-0.06	-0.04	0.05	0.04	0.1	-0.05	-0.08	1	-0.01	-0.01	-0.03	-0.02	-0.01	-0.02	-0.01	-0	-0	-0	-0.04	-0.03	-0.03	-0.02	-0.01	-0.01	-0	-0
undisclosed	0.04	0.04	0.01	0.01	0.01	-0.05	-0.06	-0.01	1	-0	-0.03	-0.02	-0	-0.01	-0	-0.01	-0	0	-0.03	-0.02	-0.01	-0.01	-0	0	0	-0
convertible_note	0.02	0.08	-0	-0	0.04	-0	-0.02	-0.01	-0	1	0.02	-0	0.01	-0	-0	-0	-0	-0	-0.01	-0.01	-0.01	-0.01	0	-0	0	-0
debt_financing	0.21	0.28	-0.1	-0.09	-0.13	-0.11	0.09	-0.03	-0.03	0.02	1	-0.05	-0.01	0.03	0.01	0.01	0	-0.02	0.02	0.07	0.08	0.09	0.07	0.04	0.02	0.01
angel	0.01	0.11	0.08	0.07	0.06	0	-0.12	0.02	0.02	0	-0.05	1	0	-0.03	-0.02	-0.01	0	0.01	-0.02	-0.04	-0.03	-0.02	-0.02	-0.01	0	0.01
grant	0.03	0.06	0	0	0	-0.03	-0.07	-0.01	0	0.01	-0.01	0	1	-0	0	0	0	-0	-0.04	-0.02	-0.01	-0	0	0	0	-0
private_equity	0.2	0.09	-0.06	-0.05	-0.09	-0.08	-0	-0.02	-0.01	0	0.03	-0.03	-0	1	0.02	0.02	0	-0.01	-0.03	0.01	0.03	0.05	0.04	0.03	0.02	0.01
post_ipo_equity	0.1	0.04	-0.01	-0.01	-0.03	-0.04	-0	-0.01	0	0	0.01	-0.02	0	0.02	1	0.11	0.01	-0.01	-0.02	-0.01	0	0.01	0.01	0.01	0.01	
post_ipo_debt	0.05	0.02	-0.02	-0.01	-0.02	-0.02	-0.01	-0	-0.01	0	0.01	-0.01	0	0.02	0.11	1	-0	-0	-0.02	-0.01	0	0.01	0.01	0	-0	
secondary_market	0.03	0.02	0	0	-0.01	0	0.01	-0	0	0	0	0	0	0	0.01	-0	1	0	0.01	0.02	0.03	0.02	0.02	0.04	-0	
product_crowdfunding	-0.01	0.01	0	0	0.05	-0.01	-0.04	-0	0	0	-0.02	-0.01	0	-0.01	-0.01	0	-0	1	-0.01	-0.02	-0.02	-0.01	-0.01	0	0	
round_A	0.44	0.35	-0.04	-0.03	-0.13	-0.09	0.54	-0.04	-0.03	-0.01	0.02	-0.02	-0.04	-0.03	-0.02	-0.02	0.01	-0.01	1	0.36	0.19	0.1	0.05	0.03	0.01	
round_B	0.44	0.42	-0.09	-0.08	-0.22	-0.13	0.5	-0.03	-0.02	-0.01	0.07	-0.04	-0.02	0.01	-0.01	0.02	-0.02	0.36	1	0.41	0.22	0.12	0.07	0.02	0.01	
round_C	0.34	0.34	-0.08	-0.07	-0.21	-0.11	0.39	-0.03	-0.01	-0.01	0.08	-0.03	-0.01	0.03	0	0	0.03	0.02	0.19	0.41	1	0.44	0.22	0.12	0.04	
round_D	0.24	0.25	-0.06	-0.05	-0.16	-0.08	0.27	-0.02	-0.01	-0.01	0.09	-0.02	-0	0.05	0.01	0.01	0.02	0.01	0.1	0.22	0.44	1	0.39	0.2	0.07	0.03
round_E	0.16	0.16	-0.04	-0.04	-0.11	-0.05	0.17	-0.01	0	0	0.07	-0.02	0	0.04	0.01	0.01	0.02	0.01	0.05	0.12	0.22	0.39	1	0.38	0.14	0.04
round_F	0.09	0.1	-0.03	-0.02	-0.07	-0.03	0.1	-0.01	0	0	0.04	-0.01	0	0.03	0.01	0	0.02	0	0.03	0.07	0.12	0.2	0.38	1	0.3	0.11
round_G	0.04	0.04	-0.01	-0.01	-0.03	-0.01	0.05	-0	0	0	0.02	-0	0	0.02	0.01	0	0.04	0	0.01	0.02	0.04	0.07	0.14	0.3	1	0.26
round_H	0.01	0.01	0	0	-0.01	-0.01	0.02	-0	0	0	0.01	0.01	0	0.01	0	0	0	0	0.01	0.02	0.03	0.04	0.11	0.26	1	

CORRELATION ANALYSIS

Total Startup Funding by Country



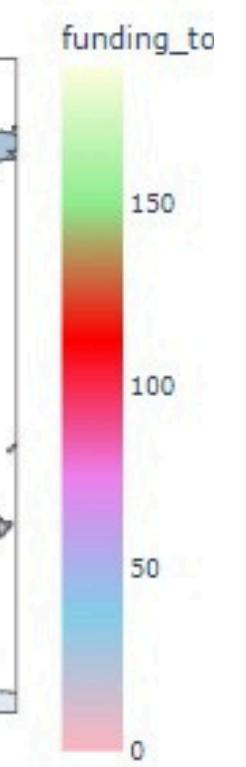
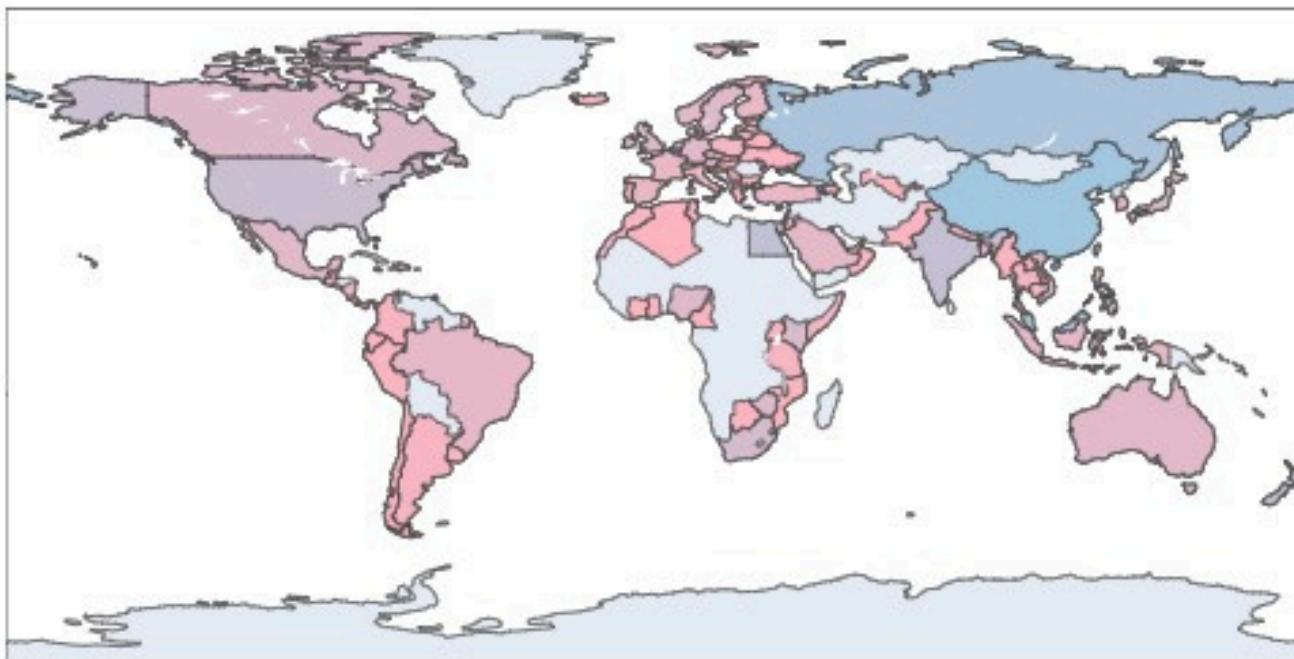
Top Countries by total funding amount

- The USA overwhelmingly leads in total funding, with over 464,000 M total funding, significantly more than any other country. This dominance reflects the high volume of startups and deals, even if individual average amounts are slightly lower.
- China (CHN) follows with a significant amount of funding but still far behind the USA. This is consistent with China's major presence in the global startup ecosystem.
- Countries like **India (IND), the UK (GBR), and Canada (CAN) are also notable, indicating they have robust startup environments with substantial total investments.
- Smaller countries like Russia (RUS) and Luxembourg (LUX) have high average funding but lower total funding, suggesting fewer deals that tend to be large, rather than a widespread funding landscape.



COUNTRY WISE FUNDING ANALYSIS

Average Startup Funding by Country



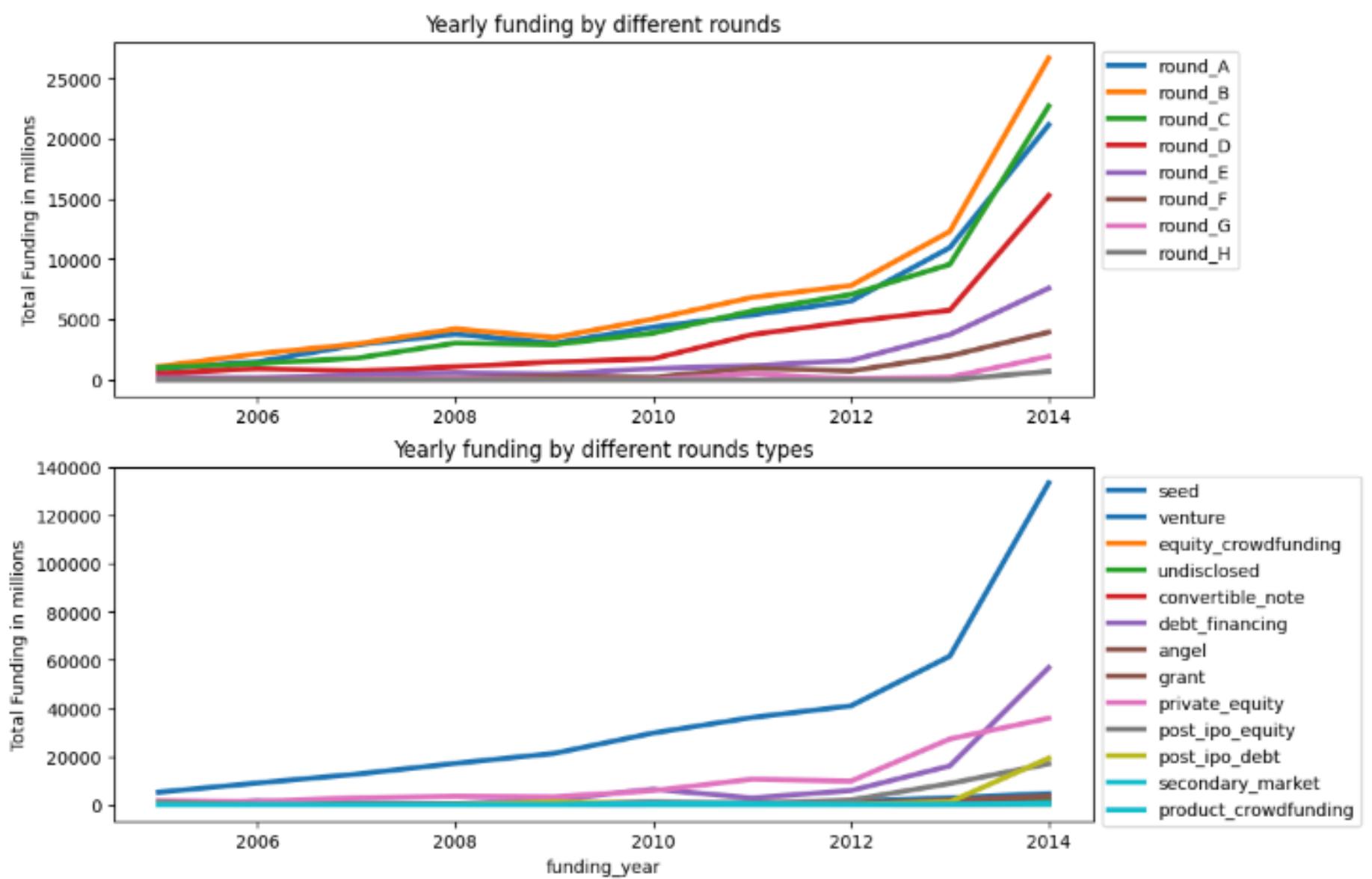
Top Countries by average funding amount

- Smaller or niche markets appear to lead in average funding amounts. Bermuda (BMU) has the highest average funding amount at around 187.92 M, which is notably higher than other countries.
- Other top countries with relatively high average funding amounts include Saint Martin (MAF), China (CHN), Luxembourg (LUX), and Russia (RUS), indicating strong investments per deal but likely fewer total deals compared to larger countries.
- Notably, the USA and India, despite large numbers of funded startups, fall somewhat lower in the list in terms of average funding per deal.

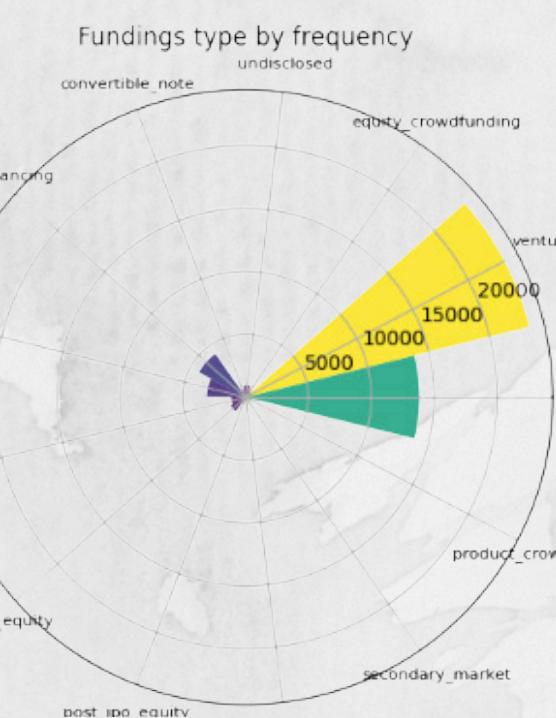
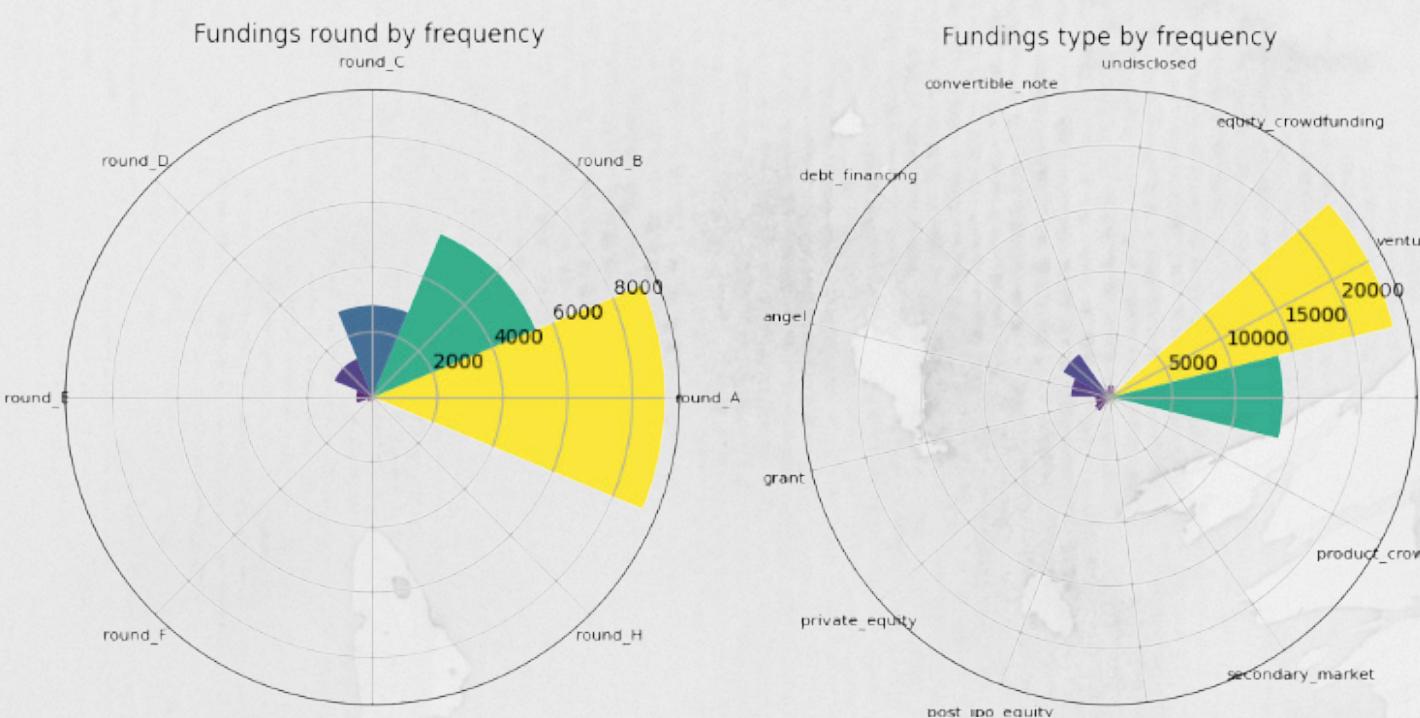
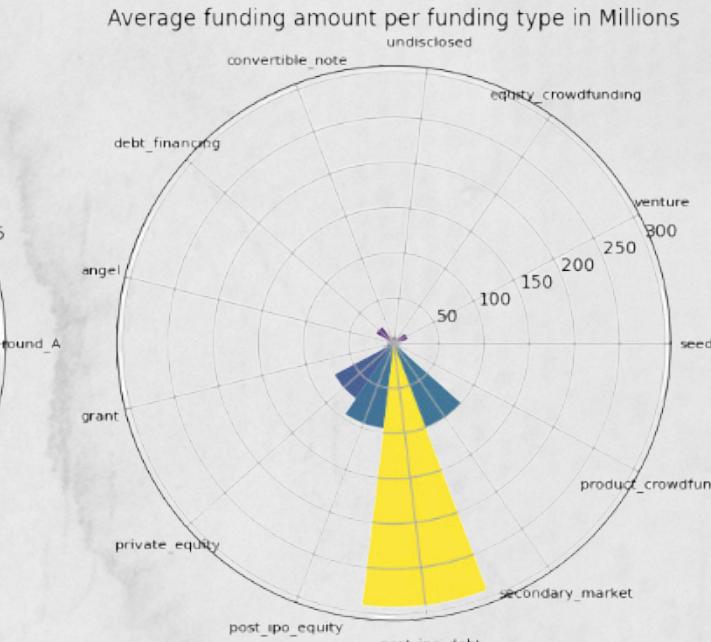
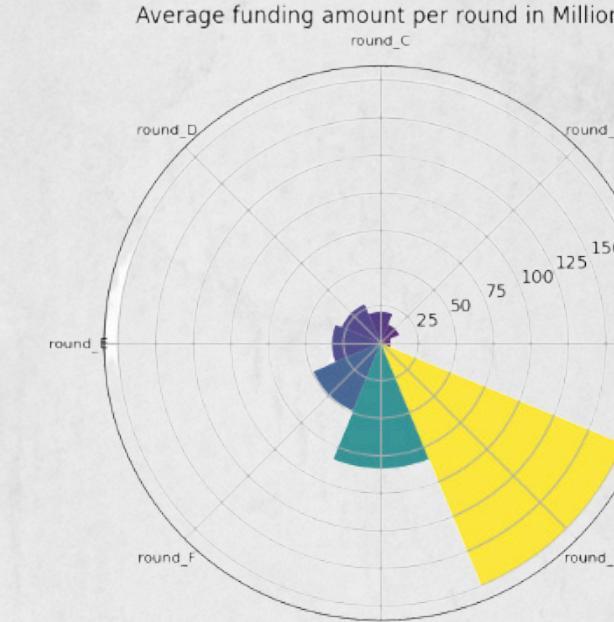
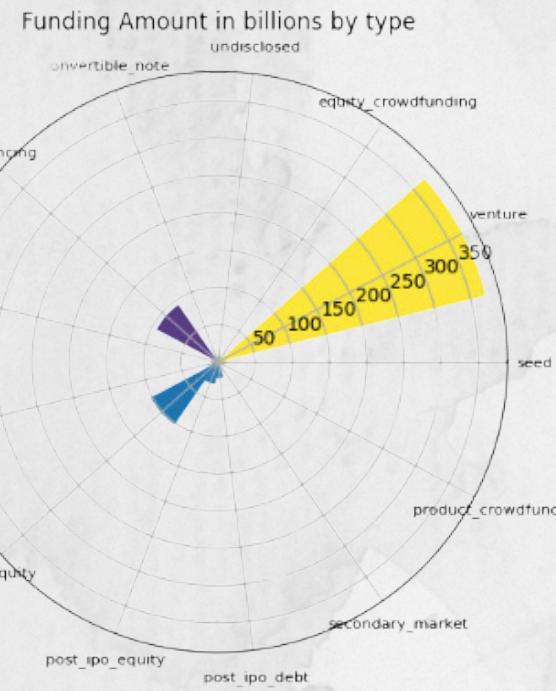
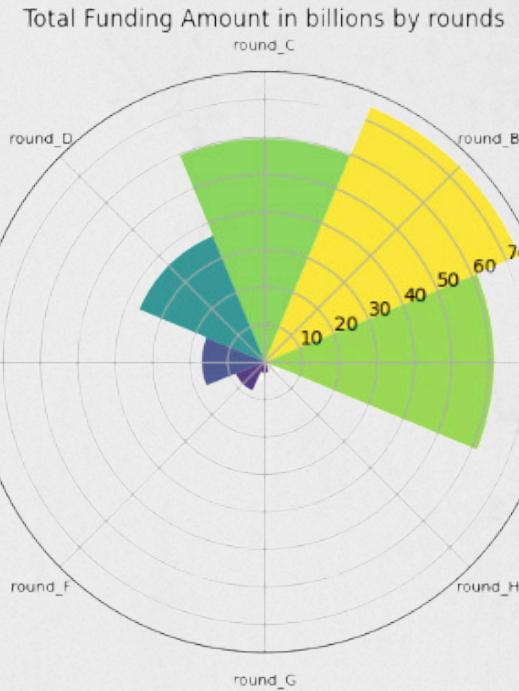


FUNDING ROUNDS AMOUNT BY YEARS

- Early-Stage Growth (Rounds A & B): There's significant growth in funding for early-stage rounds, especially between 2013–2014, which reflects increased risk tolerance by investors as well as more startups entering the ecosystem.
- Late-Stage Rounds (F, G, H): Late-stage rounds show that more startups are achieving scale, needing continued rounds of funding, which became evident by the large sums in the 2013–2014 period.
- Venture funding saw the largest growth by far, more than doubling between 2012 and 2014, indicating venture capital's leading role in the startup ecosystem.
- Equity crowdfunding and debt financing started playing a role in later years, showing new models of startup financing emerging as alternatives to traditional VC rounds.
- The steady rise in funding across rounds and types shows how the startup ecosystem matured, with more startups entering later-stage rounds by 2014.
- The shift towards more substantial funding in later rounds and diversification in funding types (like debt financing) reflects both investor confidence in established startups and the need for continued growth capital.
- The impact of global economic conditions, such as the 2008 financial crisis, led to strong recovery post-crisis, allowing startups to raise larger rounds and secure a broader array of funding options.



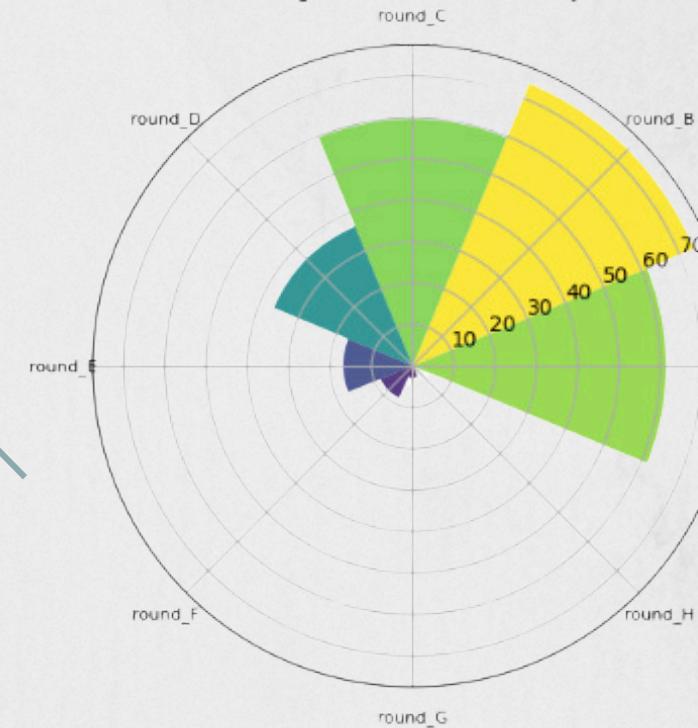
FUNDING ROUNDS AND TYPES ANALYSIS



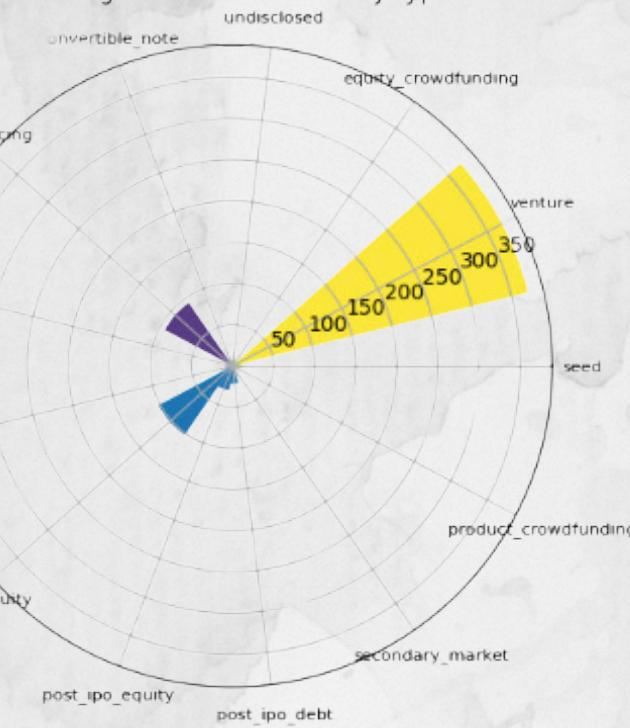
- Early-stage rounds, like A & B, are the most frequent, reflecting a large number of co's seeking initial growth funding. As rounds progress, the frequency decreases significantly, with round H having only 4 occurrences, indicating the rarity of advanced funding rounds as companies either stabilize or are acquired earlier.
- The funding amount across shows a concentration in A, B, and C, with Round B totaling the highest which suggests that mid-stage companies often receive higher investments..
- Funding amounts taper off in later rounds, with round H contributing a minimal total of 703.6 M, likely due to fewer co's reaching these rounds or companies being acquired or self-sustaining by then.
- The average funding size increases with each round, reflecting investors' growing commitment to companies as they progress. Round A starts with an average of 6.83 M, while Round H has an average funding of 175.9 M, indicating significant investment in companies that make it to later stages, signaling their higher valuation and success likelihood.

FUNDING ROUNDS AND TYPES ANALYSIS

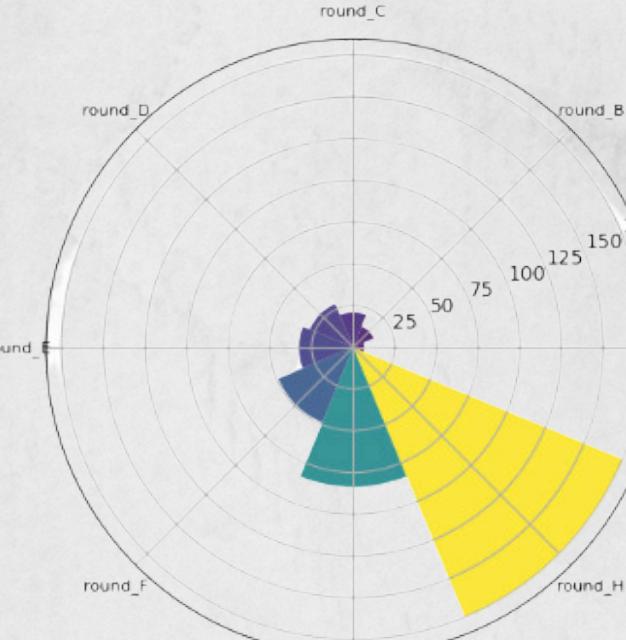
Total Funding Amount in billions by rounds



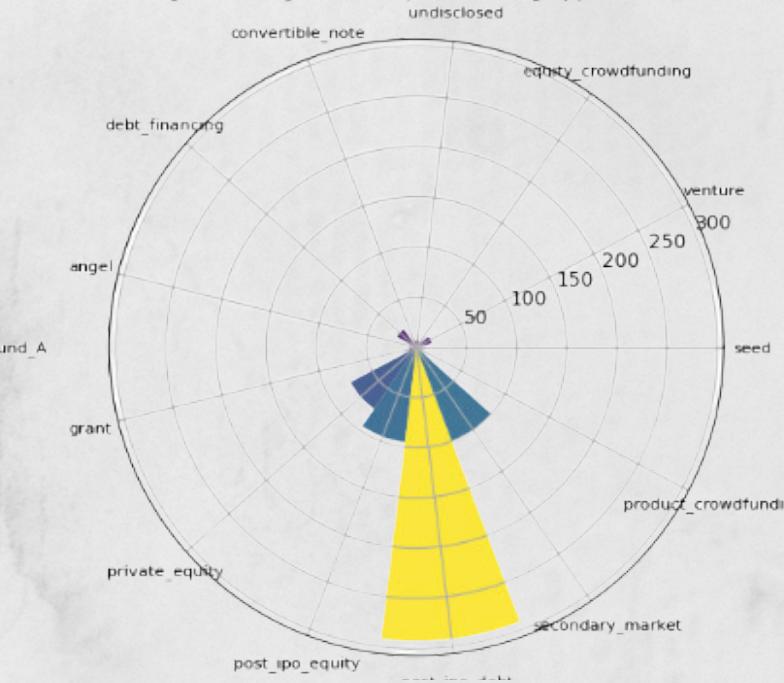
Funding Amount in billions by type



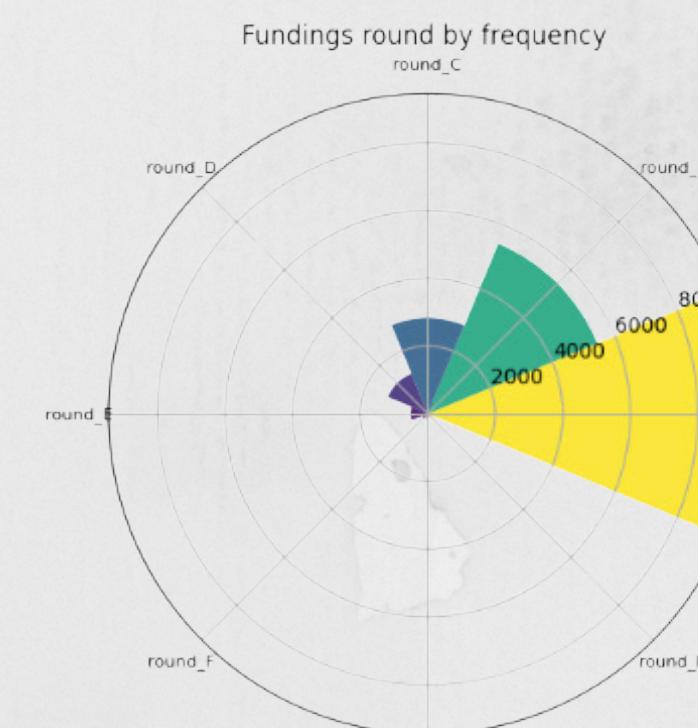
Average funding amount per round in Millions



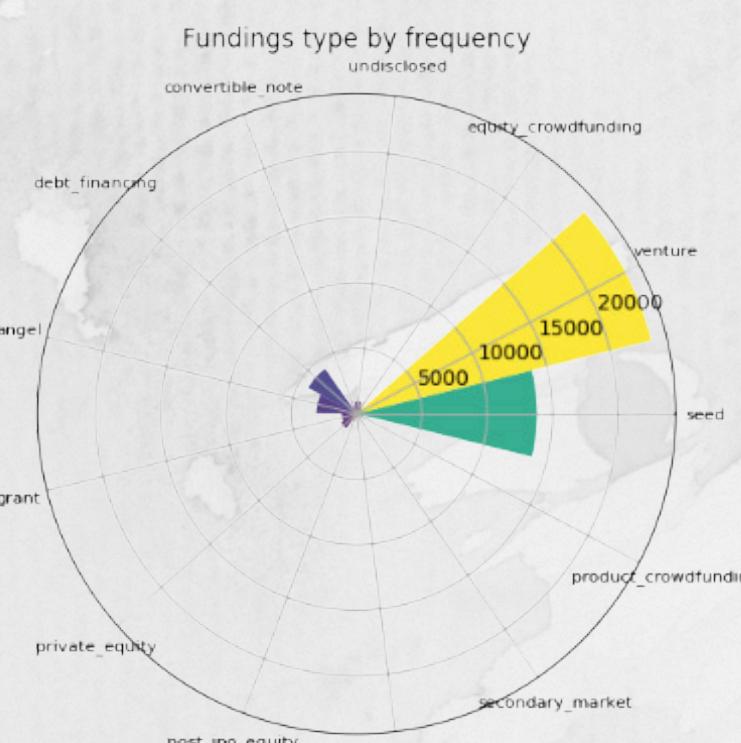
Average funding amount per funding type in Millions



Fundings round by frequency



Fundings type by frequency



- Seed and venture funding dominate, with 13,840 and 23,277 deals resp, as these are primary funding types for both early and mid-stage companies.
- Less common types, like secondary market (19 deals) and post-IPO debt (75 deals), cater to mature companies with specific needs (e.g., liquidity for existing shareholders or restructuring debt).
- Venture funding takes a significant lead with 370,837 M total funding, showing it as the most substantial investment type, especially for companies in growth phases.
- Debt financing and private equity follow at 93,347 M and 102,549 M, typically seen in established companies requiring structured capital solutions.
- Smaller amounts go to crowdfunding types (equity, product crowdfunding), which often involve smaller investors and are typically used for niche or early-stage financing.
- Post-IPO Debt has the highest average at 292.3 M. This large size is typical of later-stage or public companies seeking large financing amounts for restructuring.
- Venture has an average deal size of 15.93 M, indicating robust funding but distributed across a large number of companies.
- Private equity (74.69 M) & secondary market (100.06 M) show higher average deal sizes as they target companies with established valuations, often as part of strategic growth or exit plans.

FUNDING ANALYSIS IN 2008-2010

2008

GREAT RECESSION

Despite the global economic downturn in 2008, there was a notable jump in funding, rising from \$16.75 billion in 2007 to \$21.77 billion in 2008. This could indicate that investors continued to fund startups, particularly in tech, which was more resilient than other sectors during the crisis.

2009

POST RECESSION

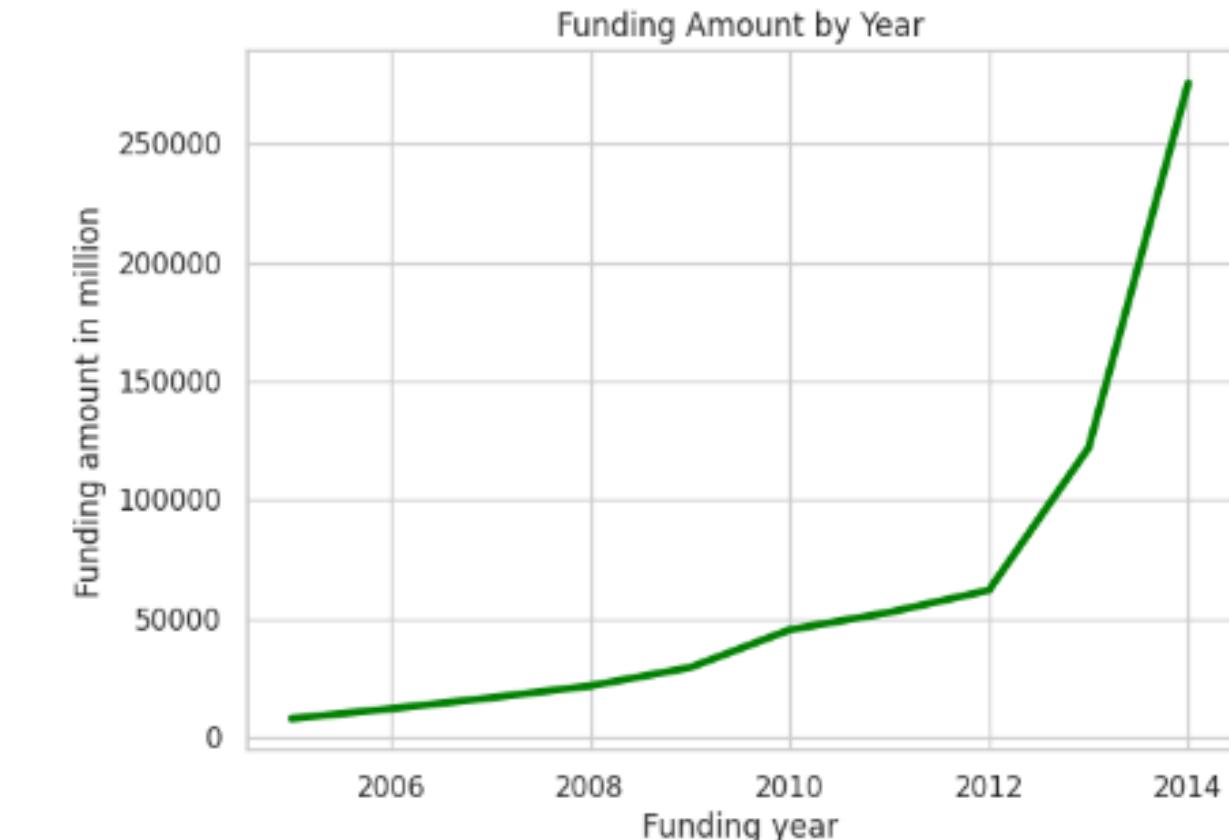
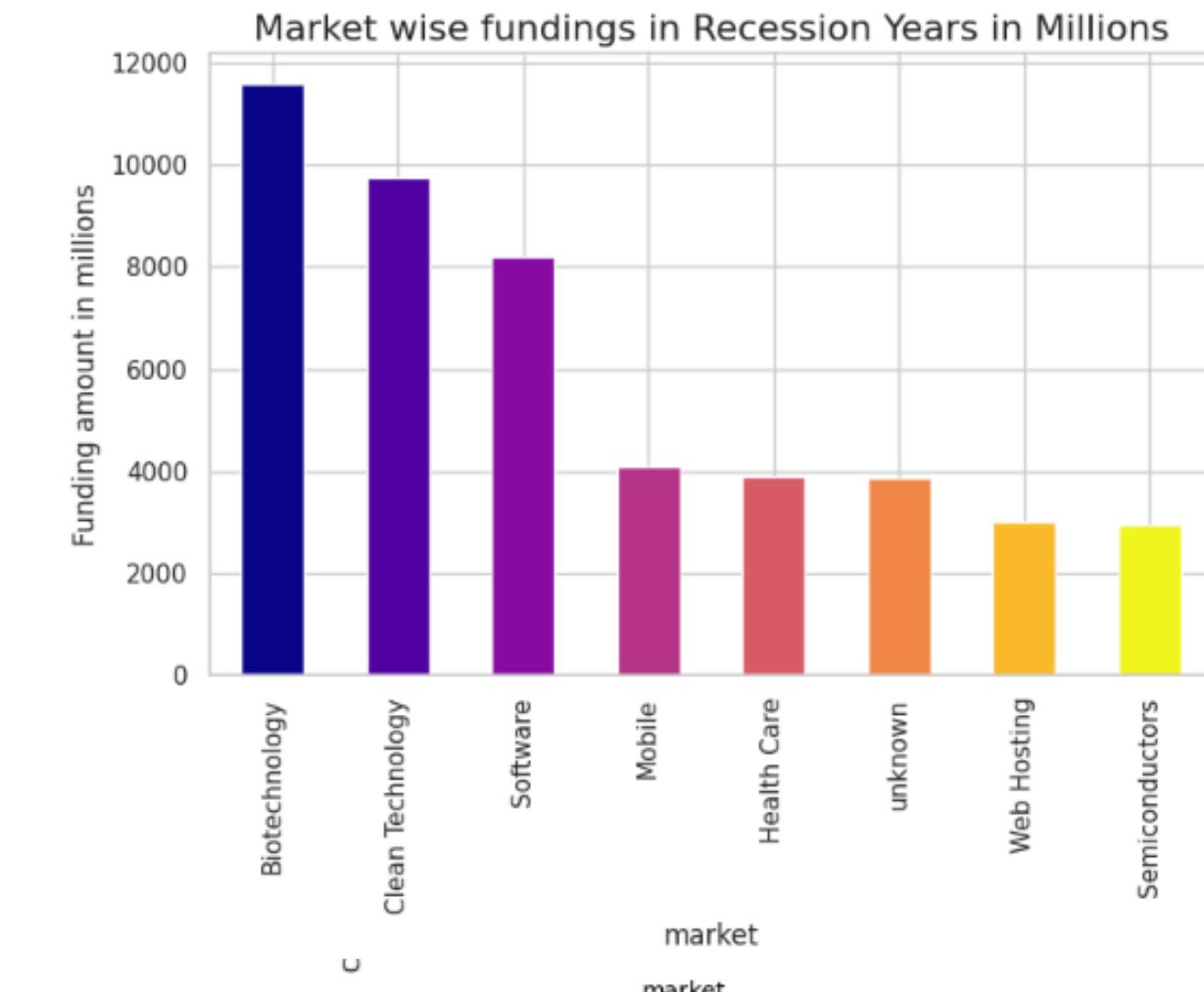
However, 2009 may show the lagging effects of the crisis, where growth slowed somewhat compared to previous years. Though there is healthy growth in the startup ecosystem, likely driven by innovation in tech and increasing investor interest.

2010

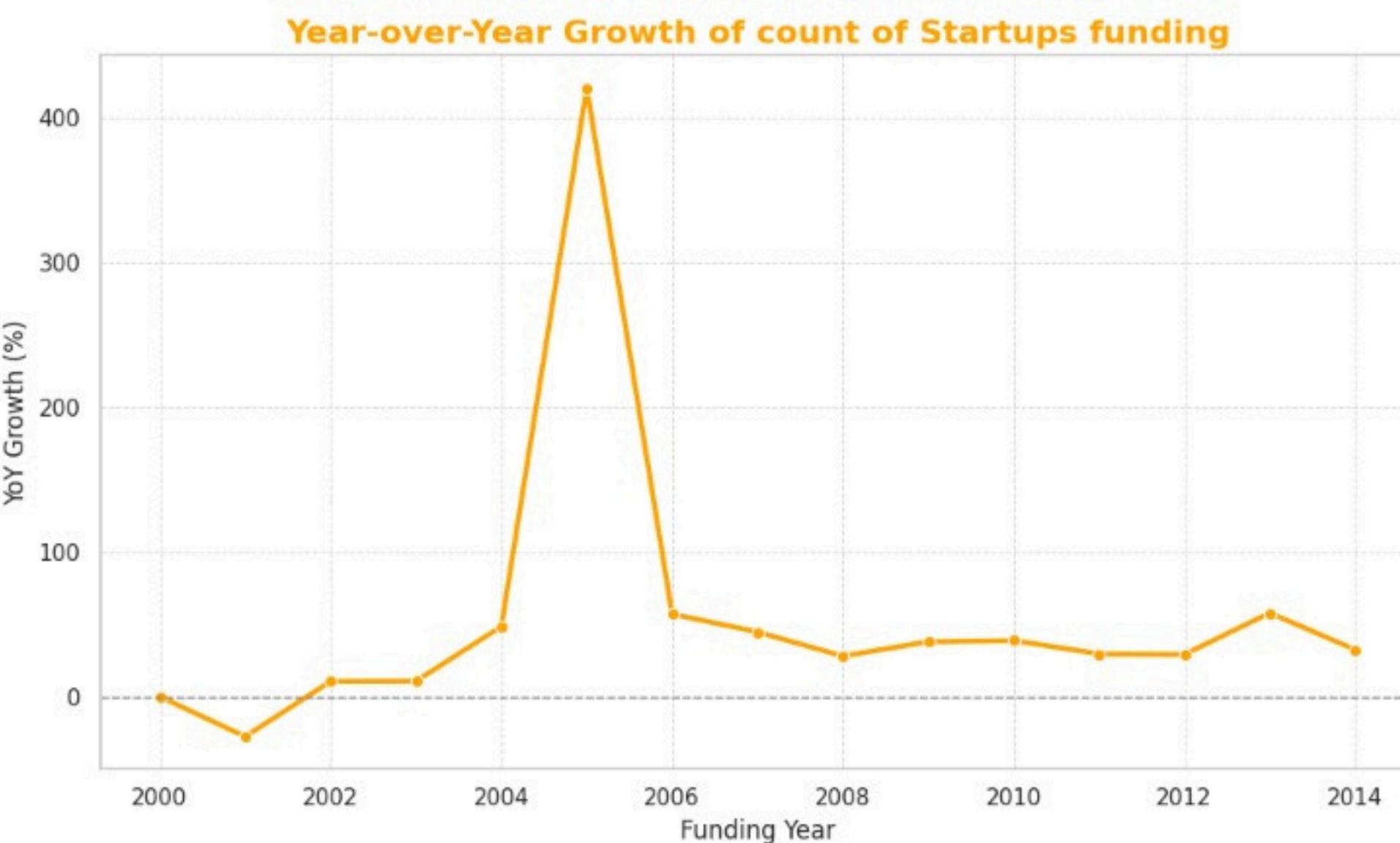
RECOVERY PERIOD

Starting from 2010, there is a significant uptick in funding, with the total climbing from \$45.34 billion in 2010 to \$527.72 billion in 2014. This post-recession boom coincides with global economic recovery, as well as the rise of major tech unicorns, increased venture capital activity, and growing investor confidence in startups.

The fundings in 2008–2010 has been mainly due to sectors like Biotech, Clean Technology, Software, Mobile, health etc. These sectors remained resilient, showing that these sectors attracted more funding despite broader economic uncertainties.



YOY GROWTH TREND



There was an explosive increase in YoY growth during 2005–2007, driven by an influx of capital into emerging startups, with 2005 being the standout year with over 420% growth.

Despite the financial crisis in 2008, the startup ecosystem continued to grow, reflecting the strength of tech and innovation as key areas of investment.

Post-crisis(2009–2014) the market rebounded quickly, with continuous double-digit growth, peaking again in 2013 with 57.78% YoY growth, possibly due to the maturing of the tech ecosystem and the rise of unicorn startups. Signs of Maturity: The slightly slower growth rates in 2014 (32.39%) suggest that the market might have been entering a more mature phase, with fewer opportunities for massive YoY jumps.

Overall, the data shows a clear trajectory of rapid expansion, particularly in the mid-2000s, followed by more stable, though still substantial, growth in the years leading up to 2014. This reflects the evolution of the startup funding landscape from early-stage, high-risk investments to a more established ecosystem.

RECOMMENDATIONS REPORT

FOR INVESTORS

- Invest in High growth sectors while exploring Clean technology.
- Geographical diversification
- Watch niche markets
- Encourage collaborative Innovations
- focus on recession free sectors

FOR STARTUPS

- Target Specialized Markets
- Build Strategic alliances
- Prepare for regional competitiveness
- Emphasize Scalability
- Seeking fund in emerging markets
- Strengthen early stage funding proposals

THANK YOU

presented by

SHAMA BANSAL