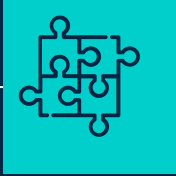


Bank Analytics Project

Domain : Finance

PROJECT OVERVIEW



01

Work Done

Created different dashboards on Bank loan of customers.



02

Tools Used

Excel, Power BI, Tableau and SQL



03

TARGET

Analysing insights using KPI's

PROJECT SUMMARY

Objective :

- The objective of the project is to comprehensively analyze bank loan data by tracking Key performance indicators (KPI's) such as Year wise loan amount, Grade & subgrade wise revolving balance, Total payment for Verified vs Not verified status, State wise and last credit pull date wise loan stats and Home ownership vs last payment date status.

Scope :

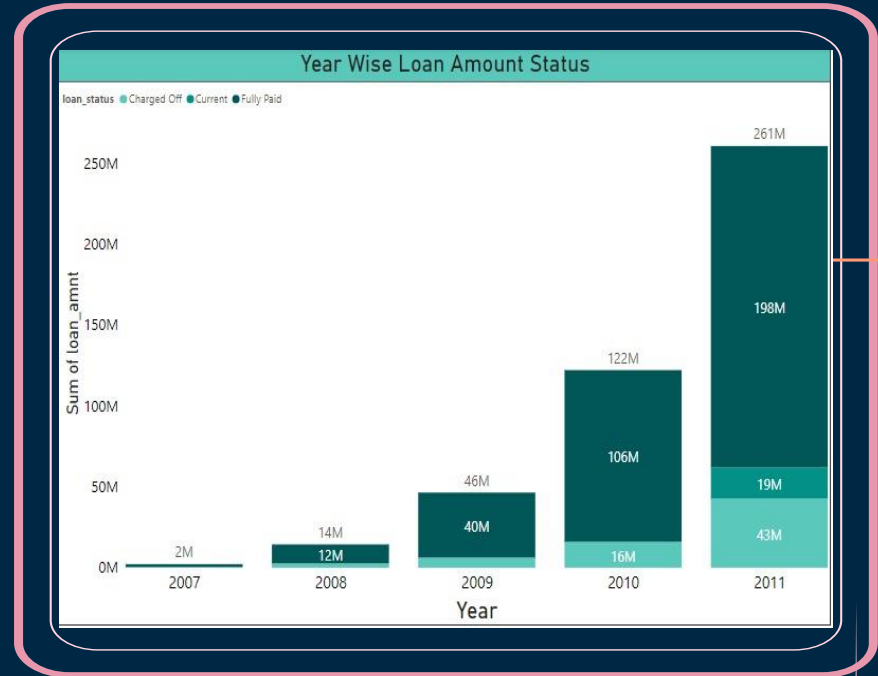
- Data Collection and Analysis
- Predictive Modeling
- Designing Bank Strategies

KPI 1 - Year wise loan amount stats

- Highest percentage increased in loan amount is 600% as a result of less outstanding between the year 2007 & 2008.
- Lowest percentage increased in loan amount is 114% as a result of huge outstanding between the year 2010 & 2011.

Conclusion :

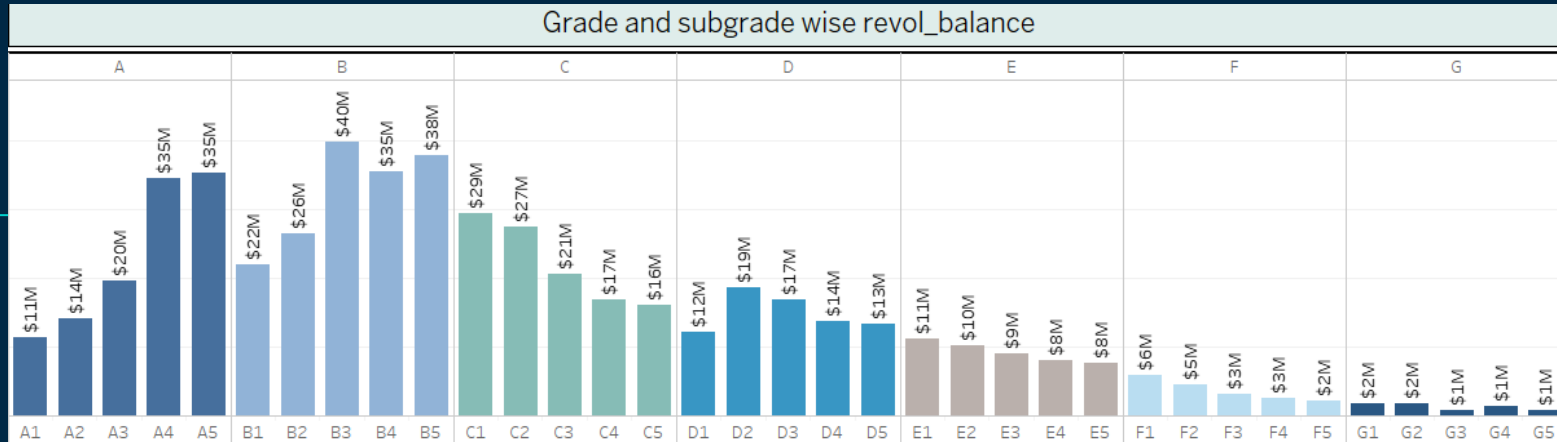
- Bank can expect 5.74% of increase in loan amount in the year 2012 and 18% for the year 2014.
- To resolve any payment errors bank can take a step of chasing up on missing or overdue payments from clients and seizing assets.



KPI 2 – Grade & subgrade wise revolving balance

- Grade B has the highest sum of revolving balance at 161M.
- Grade G has the lowest sum of revolving balance at 7M.

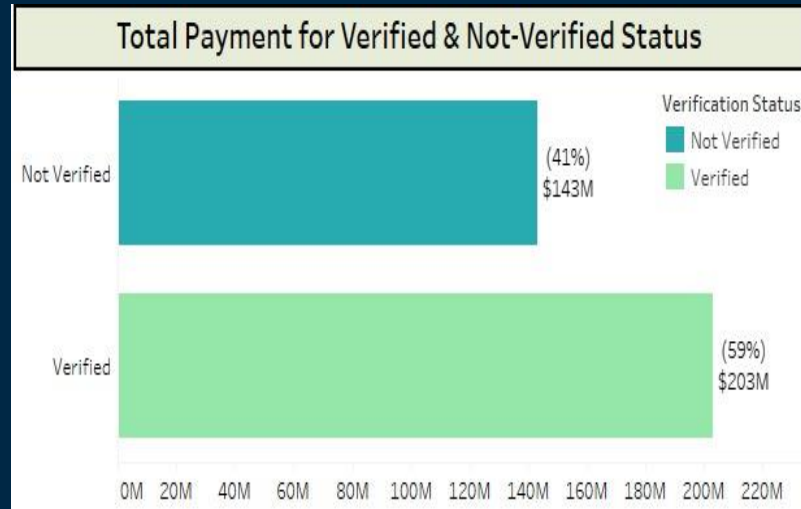
- The data may reflect creditworthiness, with higher balances in the earlier categories suggesting larger available credit.
- There is significant variation in the sum of "revolving balance" within each category, indicating differing levels of revolving credit usage.



KPI 3 - Total payment for Verified vs Not verified status



- Verified loans have undergone stricter documentation and verification processes and are associated with higher total payments.
- Not verified loans have higher risk of assurance of repayment of loans and have higher interest rate.



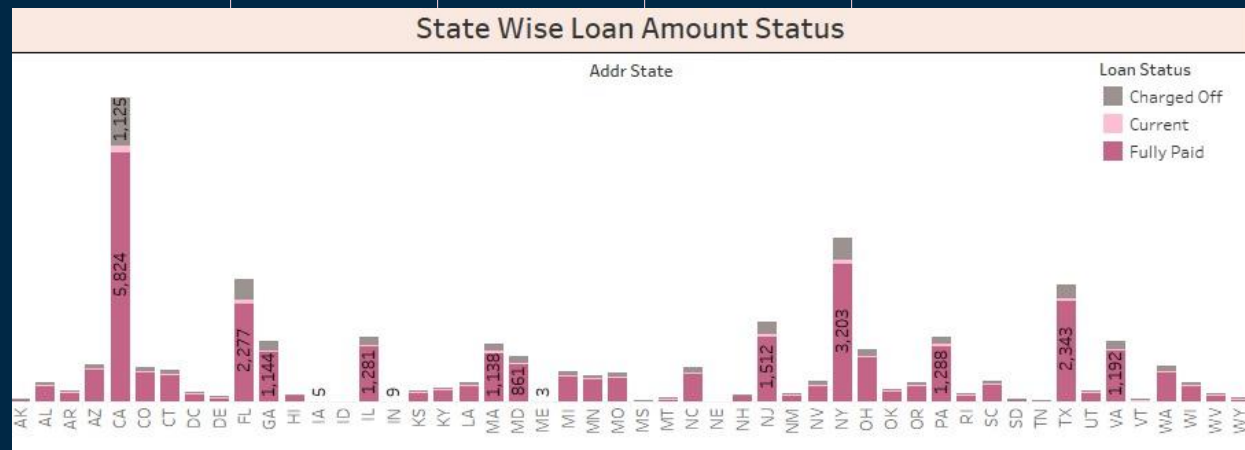
Conclusion :

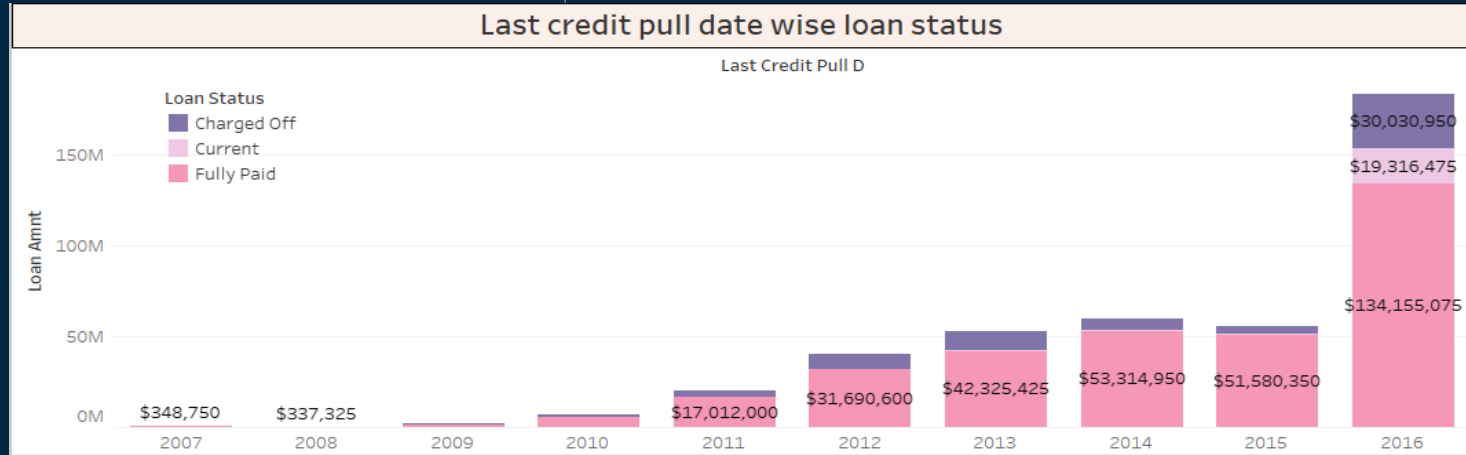
Bank should involve refining verification procedures, targeting specific customer segments and checking customers financial stability for lesser risk and more assurance of loan repayment.



KPI 4 – State wise & last credit pull date wise loan status

- There are notable differences in loan status distributions across states. States with stronger economies, such as **California (CA)**, **New York (NY)**, and **Texas (TX)**, tend to have higher counts across all loan statuses.





- There is a substantial increase in the total loan amount over the years, with significant growth observed particularly from 2012 onwards.
- The "Charged Off" category indicate loans that have been declared as losses. The total amount of charged-off loans increases over the years, peaking in 2016.
- The "Current loan" category refers to the loans that are currently active and being repaid by the borrowers. The amounts in this category are relatively stable across the years, with a slight increase observed in later years.
- The "Fully paid" category represents loans that have been fully repaid by the borrowers. The amounts under this category show a consistent upward trend over the years, indicating an increase in successful loan repayments.

KPI 5 – Home ownership vs last payment date stats



➤ Rent category represents the first largest group, it indicates that a significant portion of individuals are renting their homes rather than owning.

➤ Mortgage category represents the second largest group, it indicates substantial no. of individuals are homeowners with active mortgage loans.

➤ Own category is the smallest among the three categories which indicates that least no. of individuals have more flexibility to manage their finances.

Conclusion :

➤ Renters prioritize on time payments to maintain their rental agreements and avoid potential consequences.

➤ Homeowners exhibit the highest level of financial stability and commitment to on time payments.

➤ Mortgage holders committed to their housing payments and may face higher financial pressure.

Conclusion



Bank need to understand the demographics of customers taking loans, such as age, income level, occupation, and credit score. This information can help the bank design targeted loan products and marketing strategies.

By analyzing the most common purposes for which customers are taking loans like home purchase, car loan, education, personal use etc. This helps to understand customer needs, accordingly bank can offer the loan products.

By examine the range of interest rates and loan terms offered to customers, bank can provide insights into the competitiveness of the loan offerings and how they compare with other financial institutions.

Tableau Dashboard



Bank Loan Dashboard

Year of Issue D

(All)

Loan Status

(All)

Grade

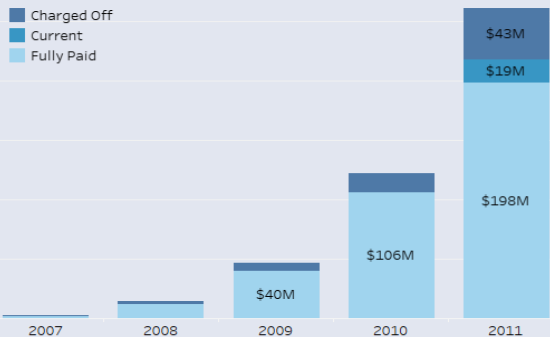
(All)

Total Loan Amount
\$446M

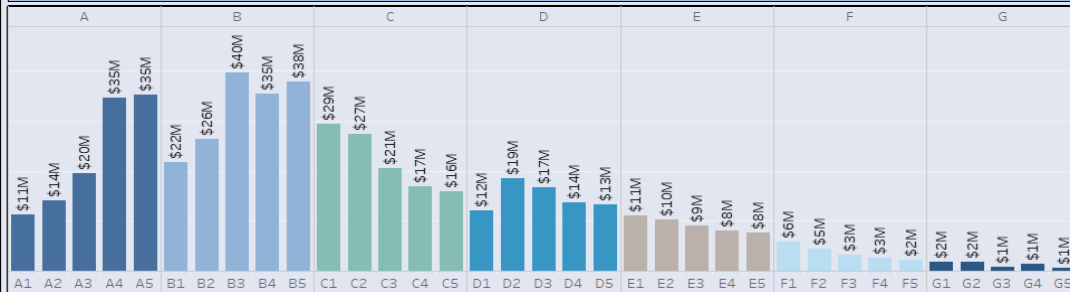
Total Fund
\$434.81M

Total Investment
\$459.41M

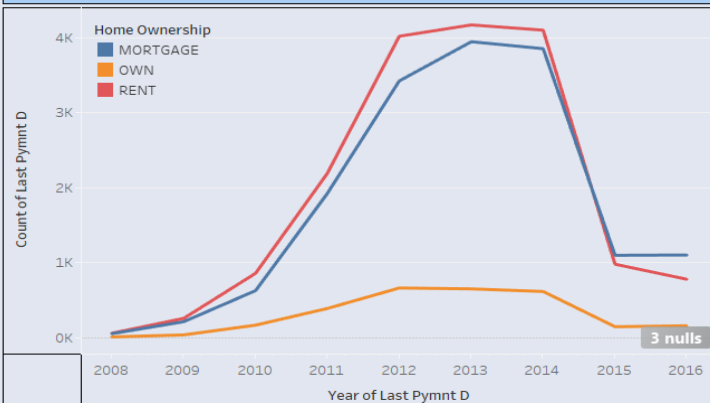
Year wise loan amount



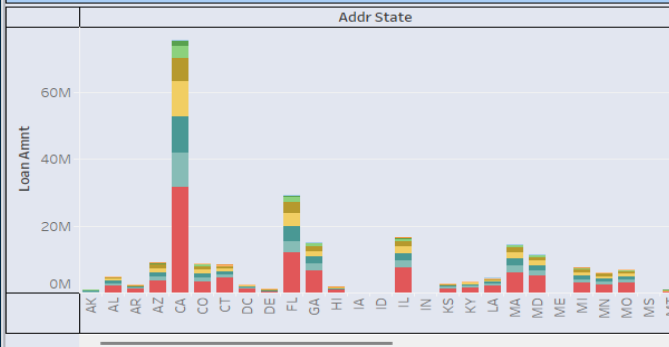
Grade and subgrade wise revol_balance



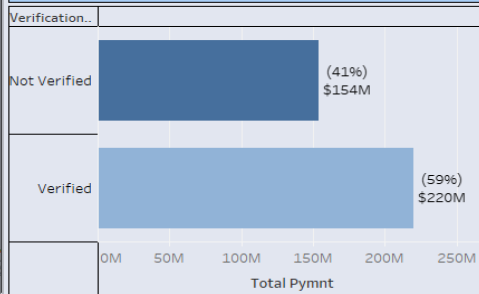
Year wise Home ownership vs last pymnt date stats



State wise and last credit pull wise loan status



Verified vs Not verified status payment



Power BI Dashboard (Page-1)



BANK LOAN DASHBOARD

Total Loan Amount

445M

Total Fund

434M

Total Investment

459M

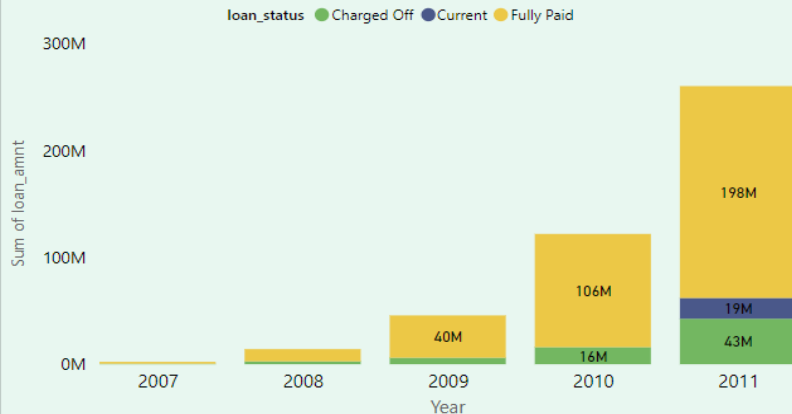
loan_status

Charged Off

Current

Fully Paid

Year wise loan amnt stats



verification_status

☐ Not Verified

☐ Source Verified

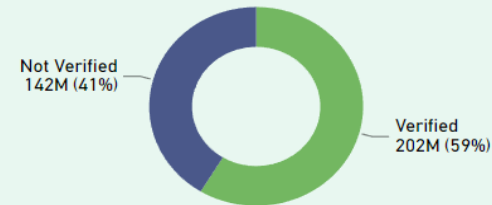
☐ Verified

home_ownership

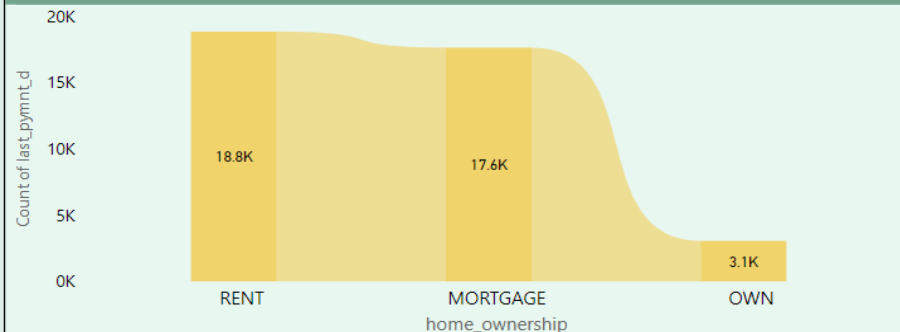
Multiple selection...

Total Payment for Verified Vs Not Verified

verification_st... ● Verified ● Not Verified



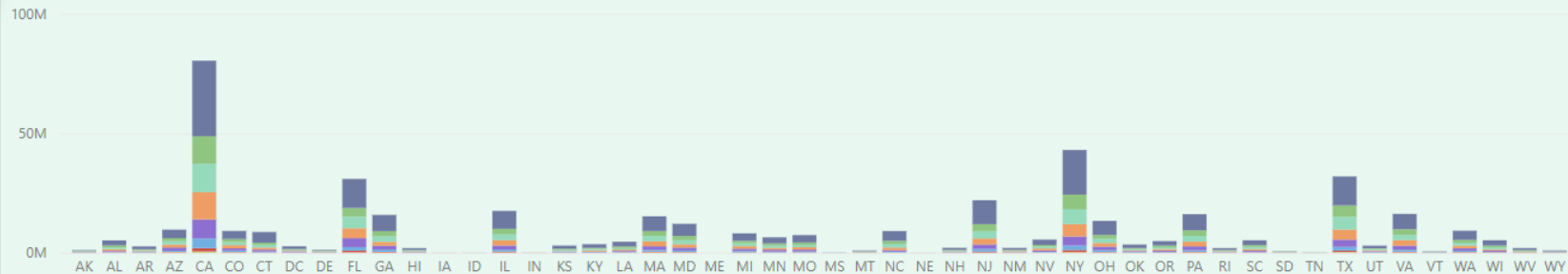
Home ownership Vs last payment date stats





State and last_credit_pull_d wise loan status

Year ● 2007 ● 2008 ● 2009 ● 2010 ● 2011 ● 2012 ● 2013 ● 2014 ● 2015 ● 2016



Year

Multiple selections

grade

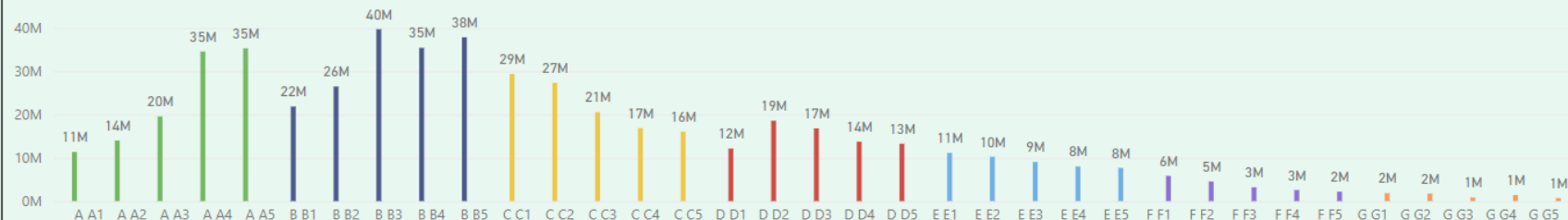
All

addr_state

All

Grade and sub grade wise revol_bal

grade ● A ● B ● C ● D ● E ● F ● G



the 1990s, the number of people in the United States who are 65 years of age or older has increased by 50 percent. The number of people 75 years of age or older has increased by 100 percent. The number of people 85 years of age or older has increased by 200 percent. The number of people 95 years of age or older has increased by 400 percent. The number of people 100 years of age or older has increased by 800 percent. The number of people 105 years of age or older has increased by 1,600 percent. The number of people 110 years of age or older has increased by 3,200 percent. The number of people 115 years of age or older has increased by 6,400 percent. The number of people 120 years of age or older has increased by 12,800 percent. The number of people 125 years of age or older has increased by 25,600 percent. The number of people 130 years of age or older has increased by 51,200 percent. The number of people 135 years of age or older has increased by 102,400 percent. The number of people 140 years of age or older has increased by 204,800 percent. The number of people 145 years of age or older has increased by 409,600 percent. The number of people 150 years of age or older has increased by 819,200 percent. The number of people 155 years of age or older has increased by 1,638,400 percent. The number of people 160 years of age or older has increased by 3,276,800 percent. The number of people 165 years of age or older has increased by 6,553,600 percent. The number of people 170 years of age or older has increased by 13,107,200 percent. The number of people 175 years of age or older has increased by 26,214,400 percent. The number of people 180 years of age or older has increased by 52,428,800 percent. The number of people 185 years of age or older has increased by 104,857,600 percent. The number of people 190 years of age or older has increased by 209,715,200 percent. The number of people 195 years of age or older has increased by 419,430,400 percent. The number of people 200 years of age or older has increased by 838,860,800 percent. The number of people 205 years of age or older has increased by 1,677,721,600 percent. The number of people 210 years of age or older has increased by 3,355,443,200 percent. The number of people 215 years of age or older has increased by 6,710,886,400 percent. The number of people 220 years of age or older has increased by 13,421,772,800 percent. The number of people 225 years of age or older has increased by 26,843,545,600 percent. The number of people 230 years of age or older has increased by 53,687,091,200 percent. The number of people 235 years of age or older has increased by 107,374,182,400 percent. The number of people 240 years of age or older has increased by 214,748,364,800 percent. The number of people 245 years of age or older has increased by 429,496,729,600 percent. The number of people 250 years of age or older has increased by 858,993,459,200 percent. The number of people 255 years of age or older has increased by 1,717,986,918,400 percent. The number of people 260 years of age or older has increased by 3,435,973,836,800 percent. The number of people 265 years of age or older has increased by 6,871,947,673,600 percent. The number of people 270 years of age or older has increased by 13,743,895,347,200 percent. The number of people 275 years of age or older has increased by 27,487,790,694,400 percent. The number of people 280 years of age or older has increased by 54,975,581,388,800 percent. The number of people 285 years of age or older has increased by 109,951,162,777,600 percent. The number of people 290 years of age or older has increased by 219,902,325,555,200 percent. The number of people 295 years of age or older has increased by 439,804,651,110,400 percent. The number of people 300 years of age or older has increased by 879,609,302,220,800 percent. The number of people 305 years of age or older has increased by 1,759,218,604,441,600 percent. The number of people 310 years of age or older has increased by 3,518,437,208,883,200 percent. The number of people 315 years of age or older has increased by 7,036,874,417,766,400 percent. The number of people 320 years of age or older has increased by 14,073,748,835,532,800 percent. The number of people 325 years of age or older has increased by 28,147,497,671,065,600 percent. The number of people 330 years of age or older has increased by 56,294,995,342,131,200 percent. The number of people 335 years of age or older has increased by 112,589,990,684,262,400 percent. The number of people 340 years of age or older has increased by 225,179,981,368,524,800 percent. The number of people 345 years of age or older has increased by 450,359,962,737,049,600 percent. The number of people 350 years of age or older has increased by 900,719,925,474,099,200 percent. The number of people 355 years of age or older has increased by 1,801,439,850,948,198,400 percent. The number of people 360 years of age or older has increased by 3,602,879,701,896,396,800 percent. The number of people 365 years of age or older has increased by 7,205,759,403,792,793,600 percent. The number of people 370 years of age or older has increased by 14,411,518,807,585,587,200 percent. The number of people 375 years of age or older has increased by 28,823,037,615,171,174,400 percent. The number of people 380 years of age or older has increased by 57,646,075,230,342,348,800 percent. The number of people 385 years of age or older has increased by 115,292,150,460,684,697,600 percent. The number of people 390 years of age or older has increased by 230,584,300,921,369,395,200 percent. The number of people 395 years of age or older has increased by 461,168,601,842,738,790,400 percent. The number of people 400 years of age or older has increased by 922,337,203,685,477,580,800 percent. The number of people 405 years of age or older has increased by 1,844,674,407,370,955,161,600 percent. The number of people 410 years of age or older has increased by 3,689,348,814,741,910,323,200 percent. The number of people 415 years of age or older has increased by 7,378,697,629,483,820,646,400 percent. The number of people 420 years of age or older has increased by 14,757,395,258,967,641,292,800 percent. The number of people 425 years of age or older has increased by 29,514,790,517,935,282,585,600 percent. The number of people 430 years of age or older has increased by 59,029,581,035,870,565,171,200 percent. The number of people 435 years of age or older has increased by 118,059,162,071,741,130,342,400 percent. The number of people 440 years of age or older has increased by 236,118,324,143,482,260,684,800 percent. The number of people 445 years of age or older has increased by 472,236,648,286,964,521,369,600 percent. The number of people 450 years of age or older has increased by 944,473,296,573,929,042,739,200 percent. The number of people 455 years of age or older has increased by 1,888,946,593,147,858,085,478,400 percent. The number of people 460 years of age or older has increased by 3,777,893,186,295,716,170,956,800 percent. The number of people 465 years of age or older has increased by 7,555,786,372,591,432,341,913,600 percent. The number of people 470 years of age or older has increased by 15,111,572,745,182,864,683,827,200 percent. The number of people 475 years of age or older has increased by 30,223,145,490,365,729,367,654,400 percent. The number of people 480 years of age or older has increased by 60,446,290,980,731,458,735,308,800 percent. The number of people 485 years of age or older has increased by 120,892,581,961,462,917,470,617,600 percent. The number of people 490 years of age or older has increased by 241,785,163,922,925,834,941,235,200 percent. The number of people 495 years of age or older has increased by 483,570,327,845,851,669,882,470,400 percent. The number of people 500 years of age or older has increased by 967,140,655,691,703,339,764,940,800 percent. The number of people 505 years of age or older has increased by 1,934,281,311,383,406,679,529,881,600 percent. The number of people 510 years of age or older has increased by 3,868,562,622,766,813,359,059,763,200 percent. The number of people 515 years of age or older has increased by 7,737,125,245,533,626,718,119,526,400 percent. The number of people 520 years of age or older has increased by 15,474,250,491,067,253,436,239,052,800 percent. The number of people 525 years of age or older has increased by 30,948,500,982,134,506,872,478,105,600 percent. The number of people 530 years of age or older has increased by 61,897,001,964,269,013,744,956,211,200 percent. The number of people 535 years of age or older has increased by 123,794,003,928,538,027,489,912,422,400 percent. The number of people 540 years of age or older has increased by 247,588,007,857,076,054,979,824,844,800 percent. The number of people 545 years of age or older has increased by 495,176,015,714,152,109,959,649,689,600 percent. The number of people 550 years of age or older has increased by 990,352,031,428,304,219,919,299,379,200 percent. The number of people 555 years of age or older has increased by 1,980,704,062,856,608,439,838,598,758,400 percent. The number of people 560 years of age or older has increased by 3,961,408,125,713,216,879,677,197,516,800 percent. The number of people 565 years of age or older has increased by 7,922,816,251,426,433,759,354,395,033,600 percent. The number of people 570 years of age or older has increased by 15,845,632,502,852,867,518,708,790,067,200 percent. The number of people 575

