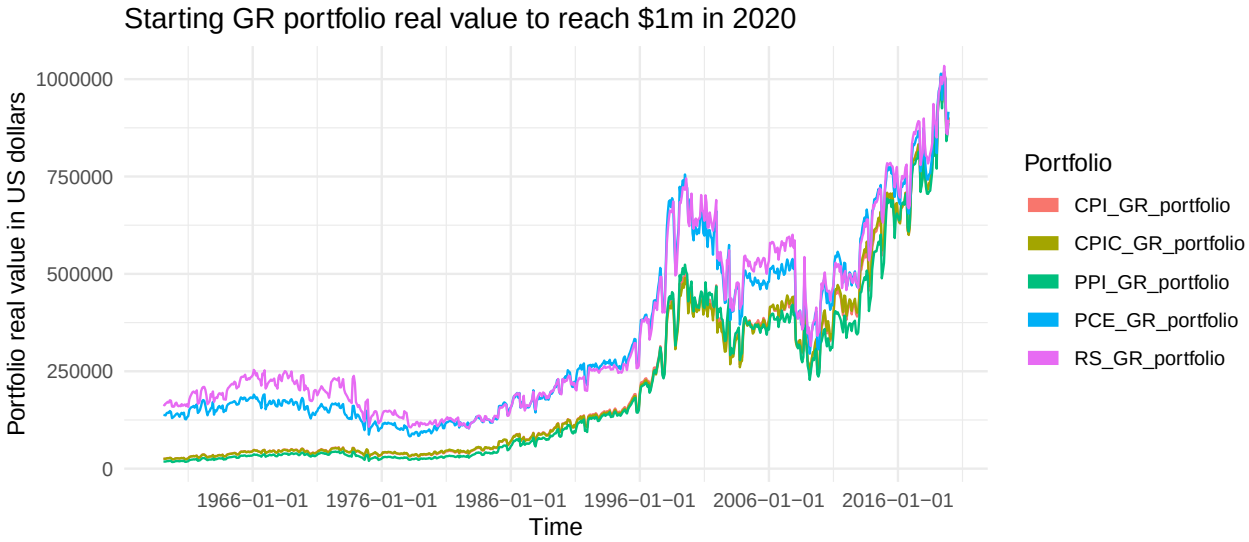
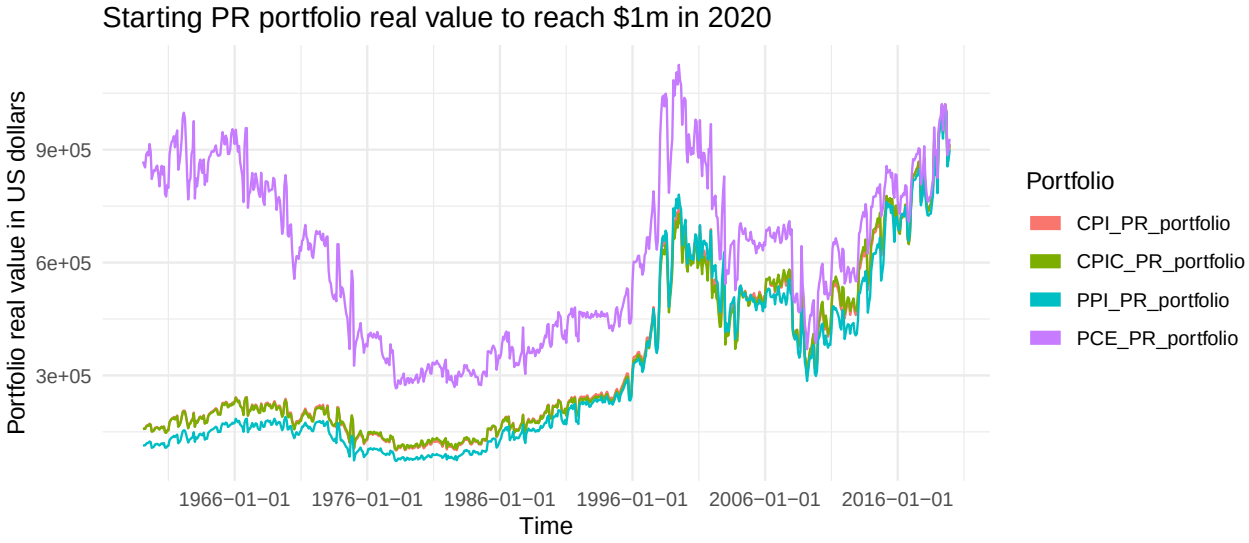
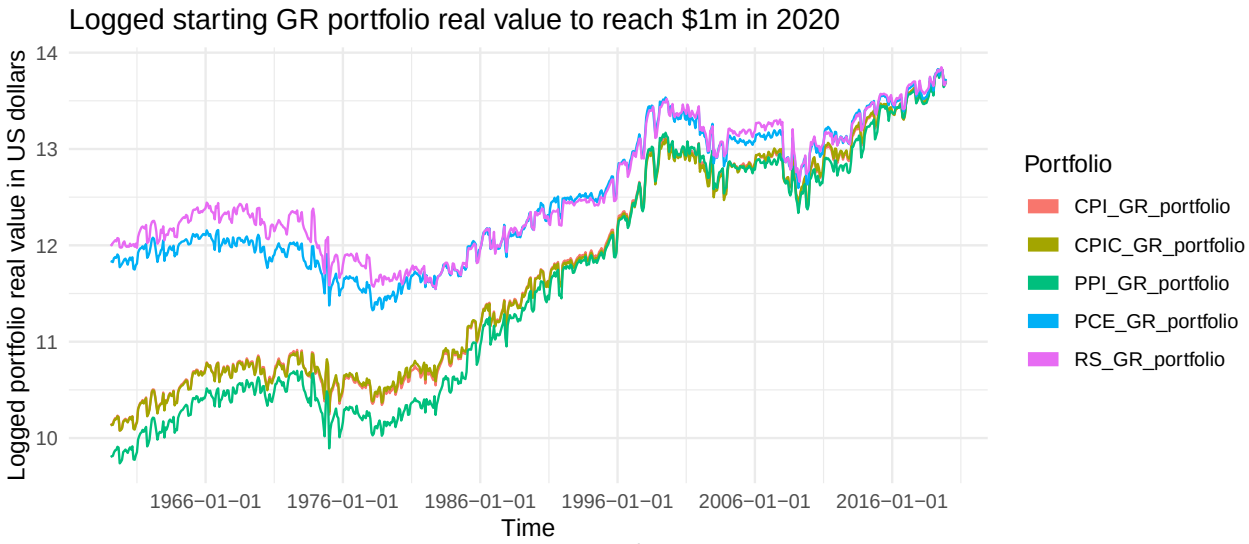
Real value of different portfolios to reach $1m in 2020

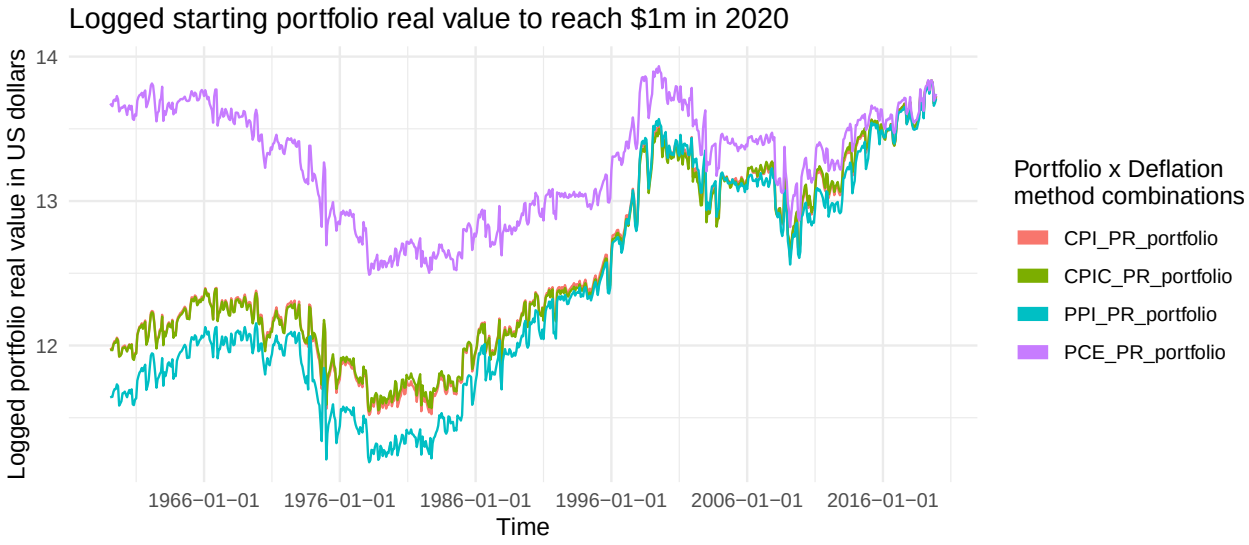
Inflation measures: CPI, CPIC, PPI, PCE

Return types: GR(gross return), PR(price return)





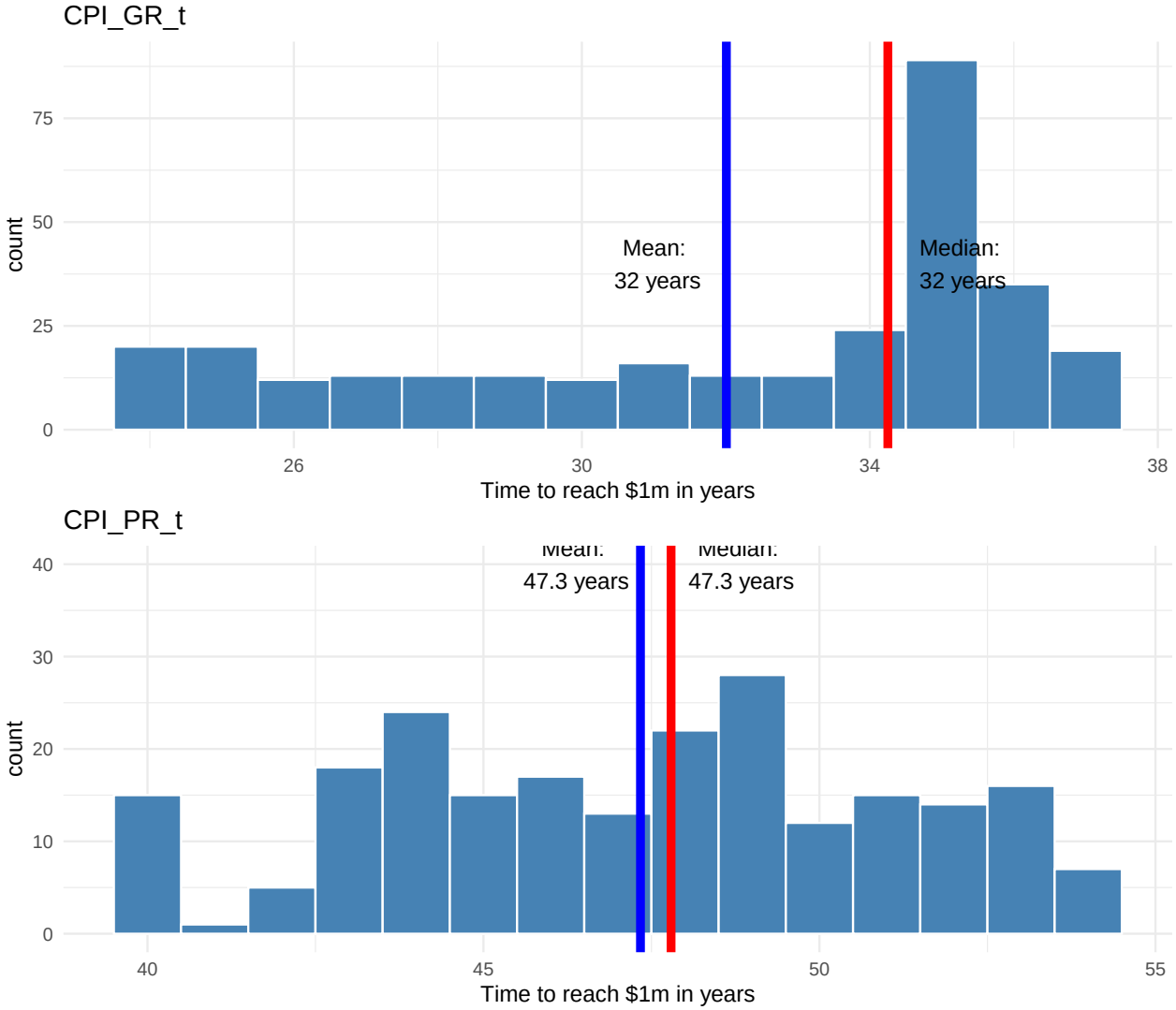


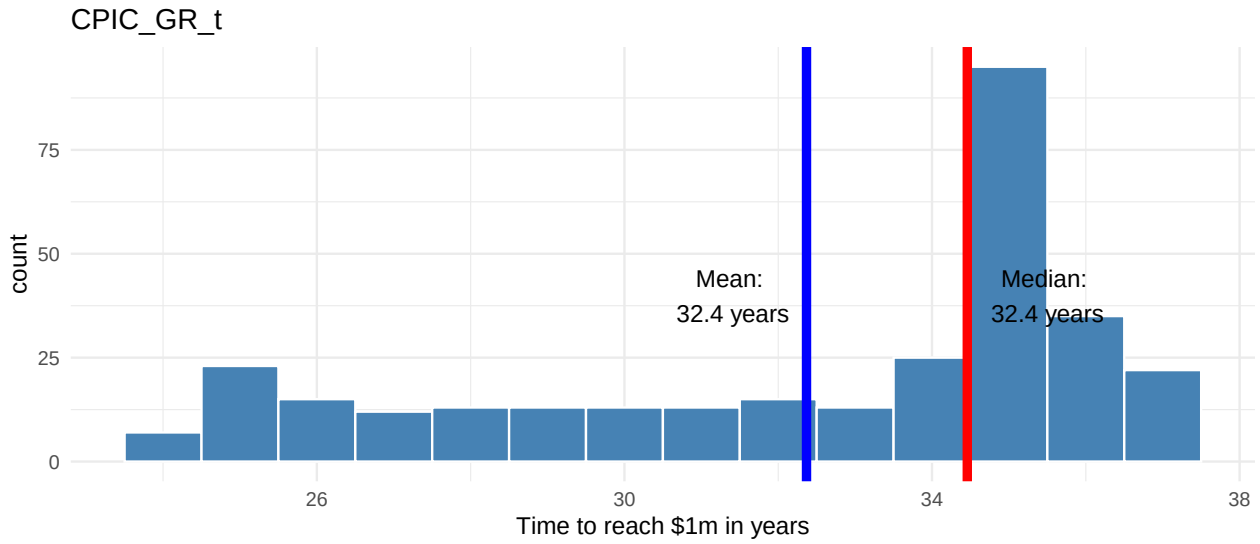


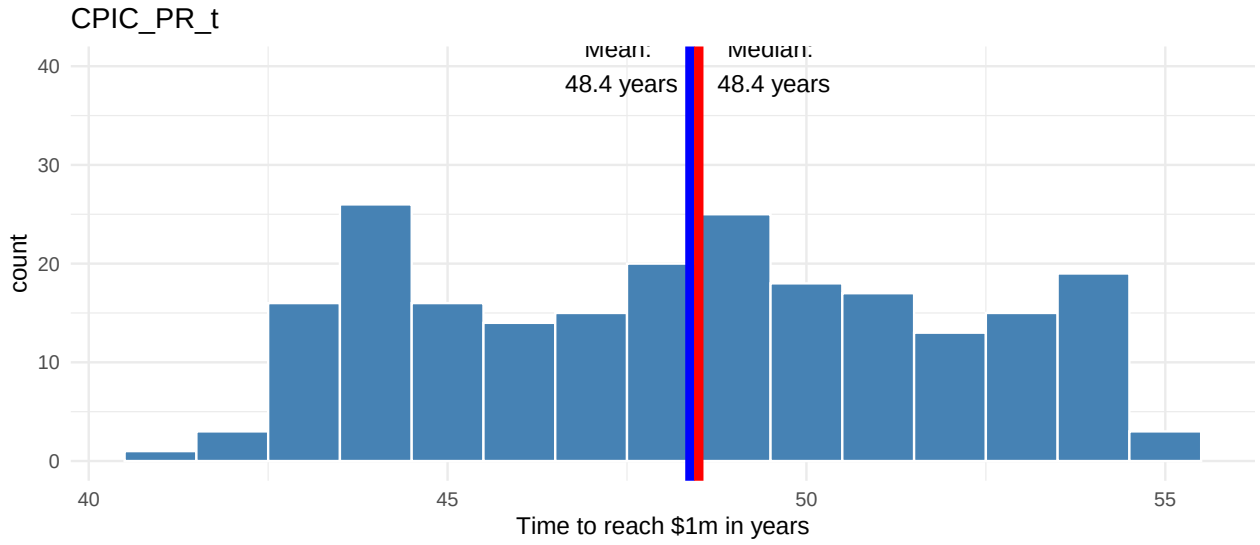
Contribute $500 each month

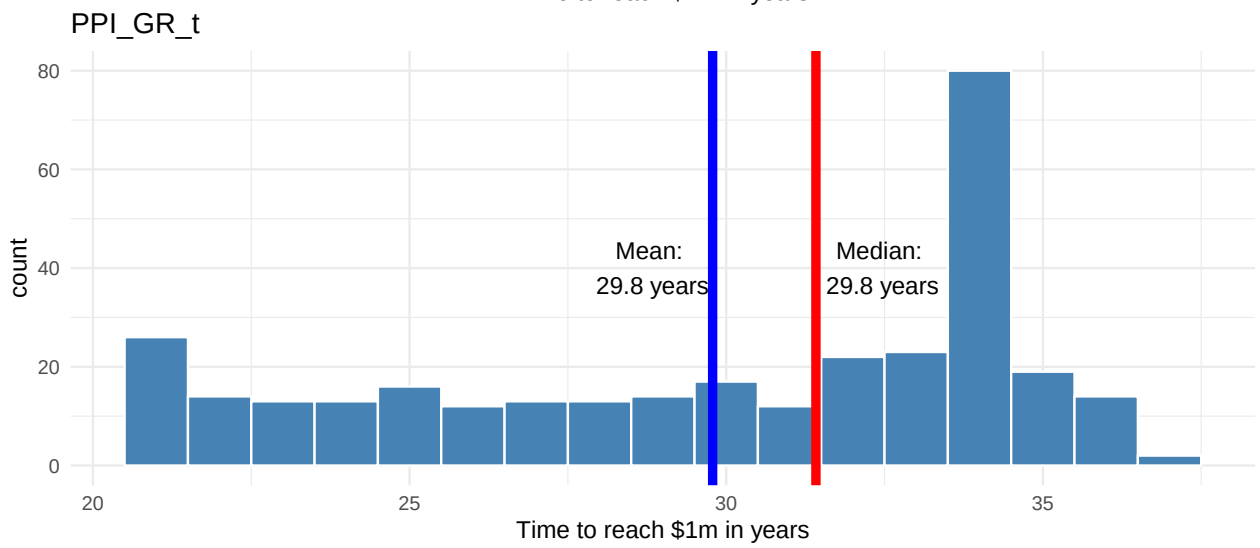
Distribution of time taken from $0 to $1m for different portfolio x deflation method combinations

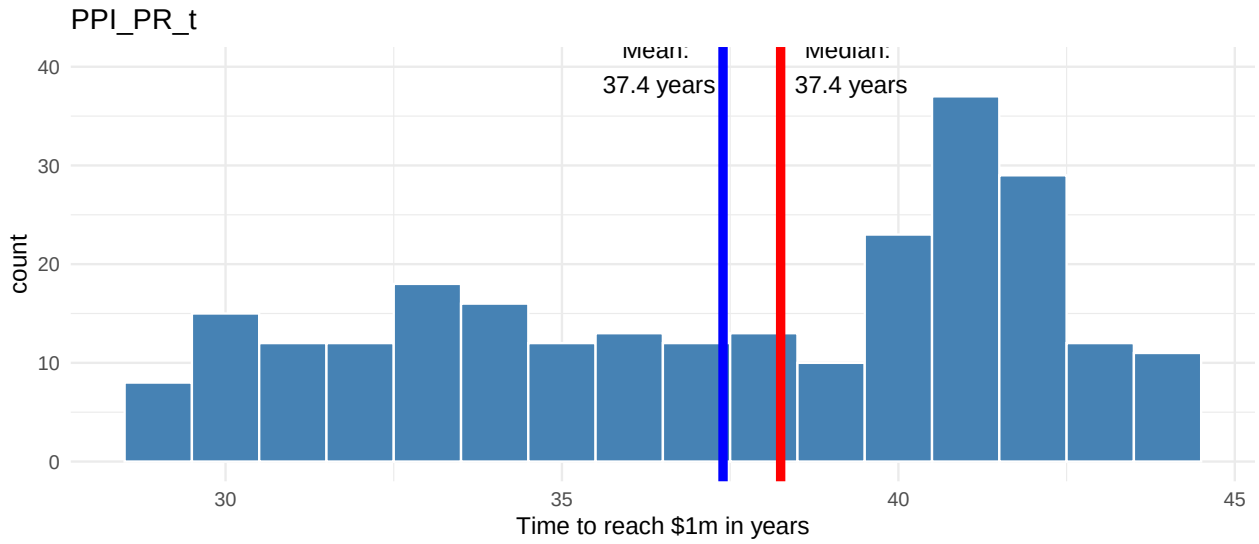
Red vertical lines in histograms represents the mean time for a portfolio to reach $1m

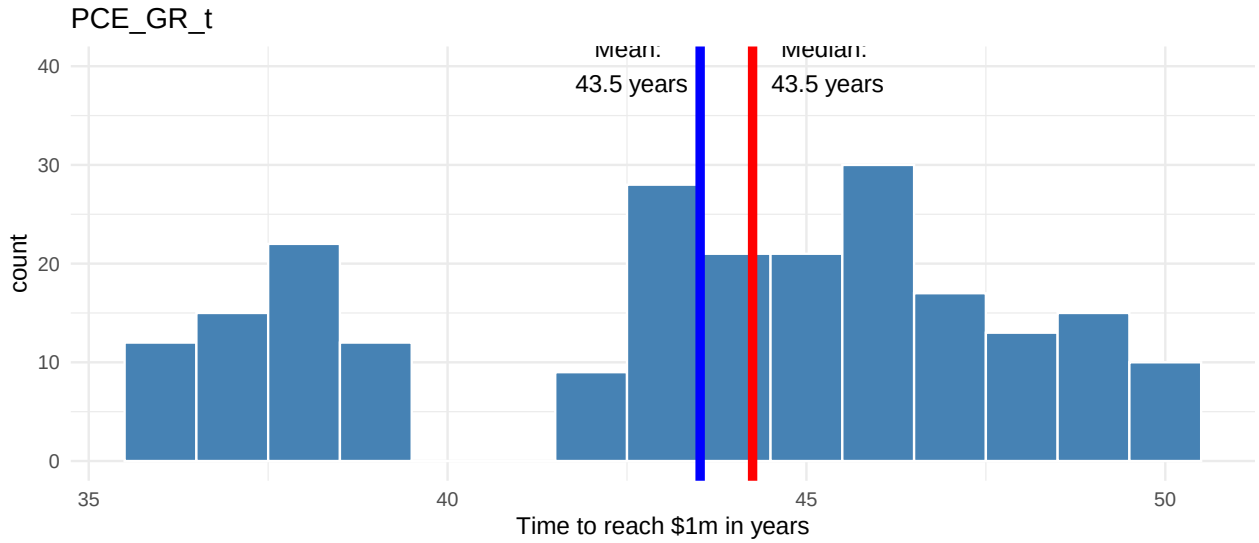



CPIC_GR_t
count
75
50
25
0
Mean:
32.4 years
Median:
32.4 years
26
30
34
38
Time to reach $1m in years

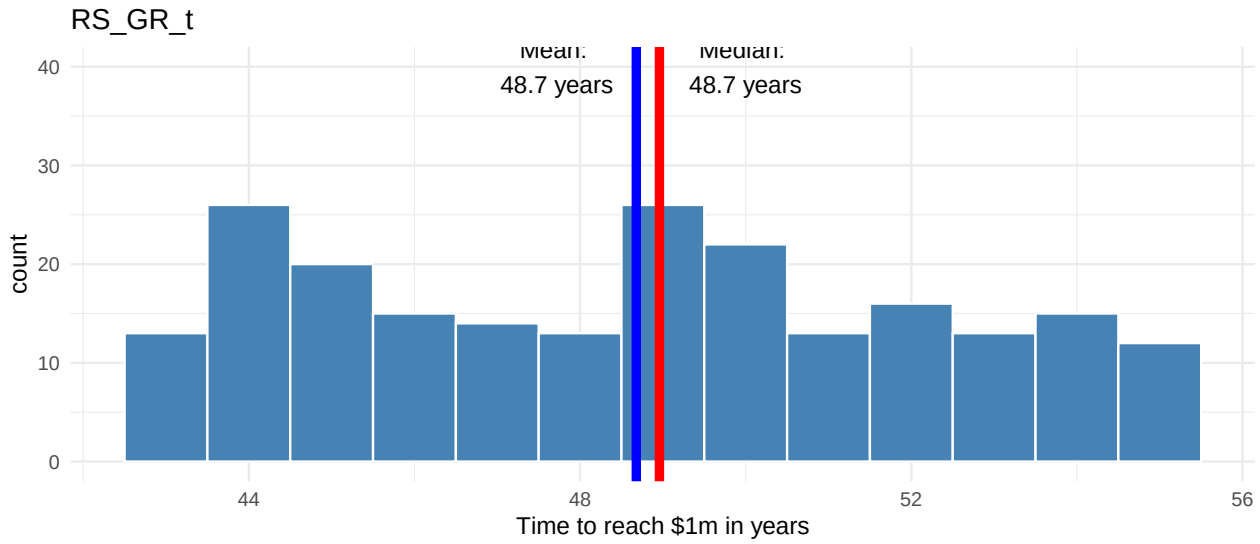

CPIC_PR_t
count
40
30
20
10
0
48.4 years
48.4 years
40
45
50
55
Time to reach $1m in years


PPI_GR_t
count
80
60
40
20
0
Mean:
29.8 years
Median:
29.8 years
20
25
30
35
Time to reach $1m in years

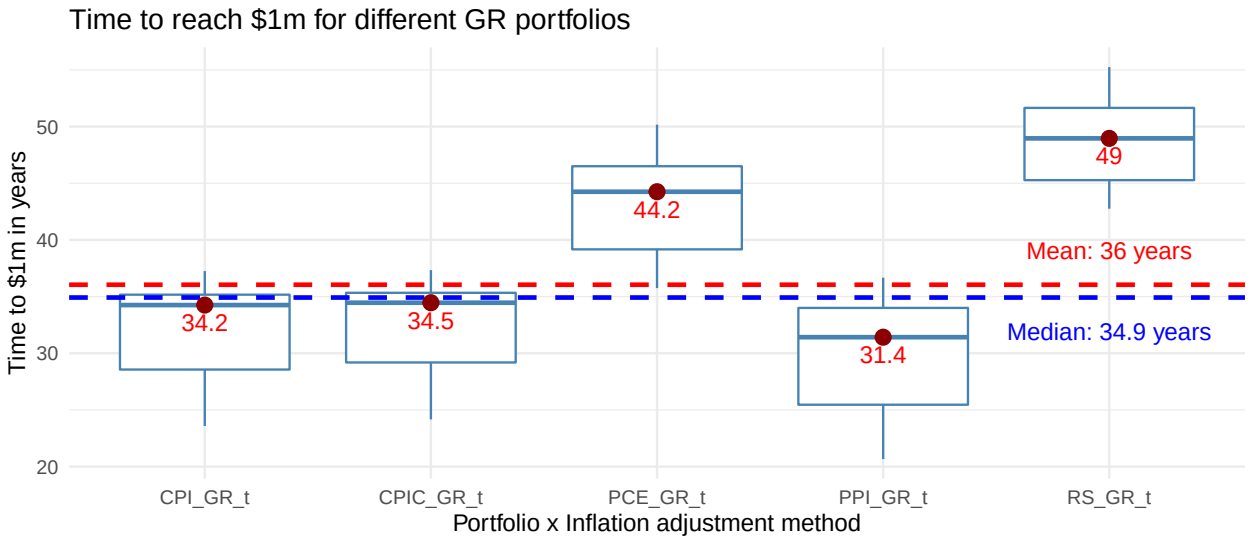

PPI_PR_t
Mean:
37.4 years
Median:
37.4 years
count
Time to reach $1m in years

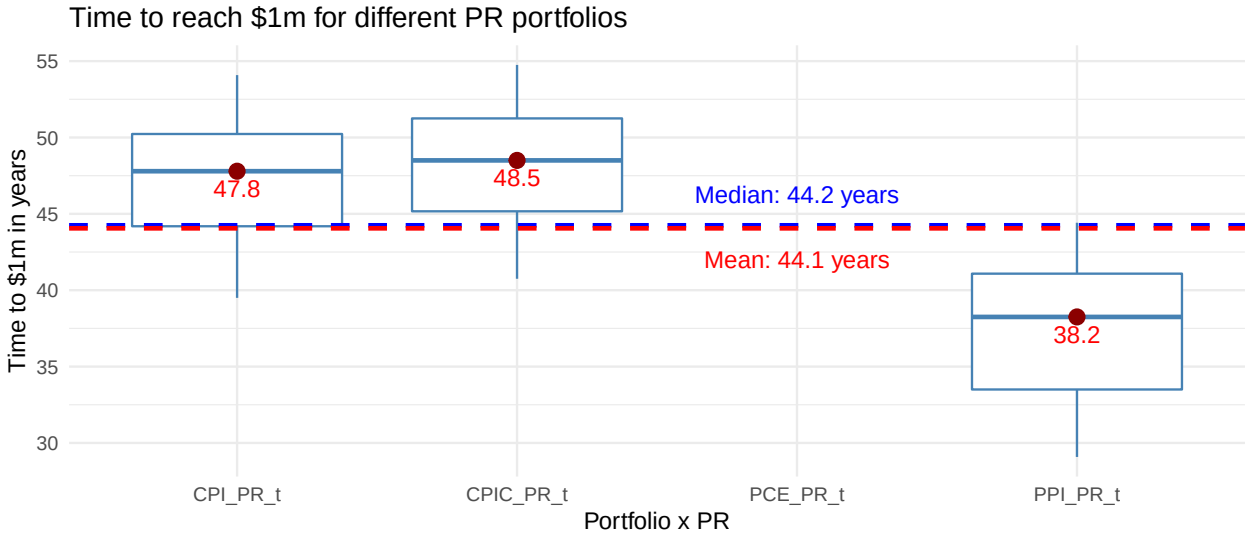

PCE_GR_t
Mean:
43.5 years
Median:
43.5 years
count
Time to reach $1m in years

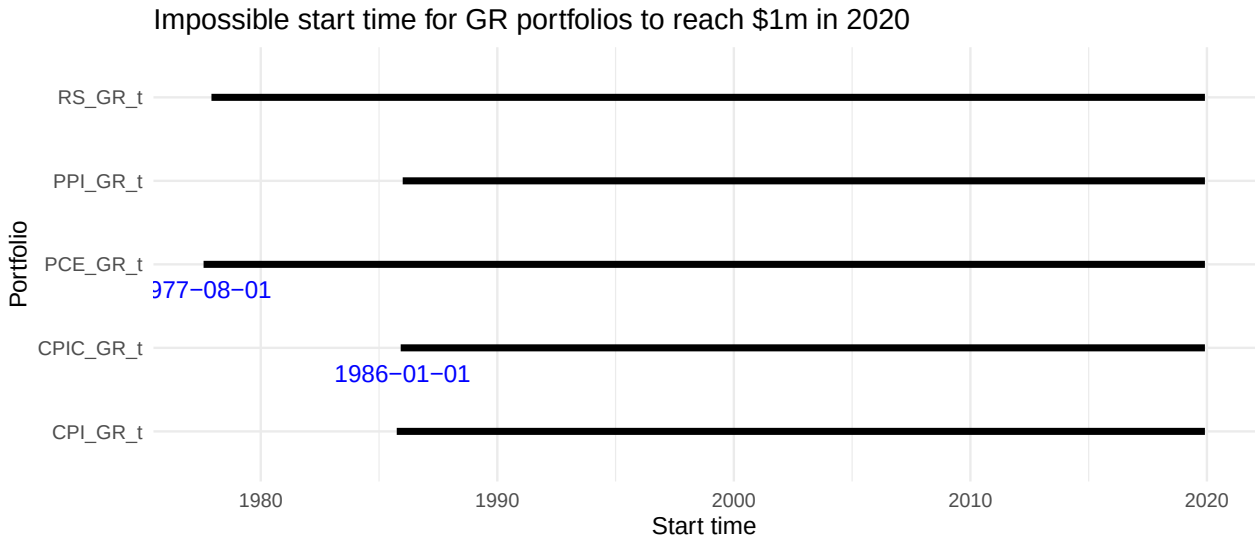
PCE_PR_t
count
Time to reach $1m in years

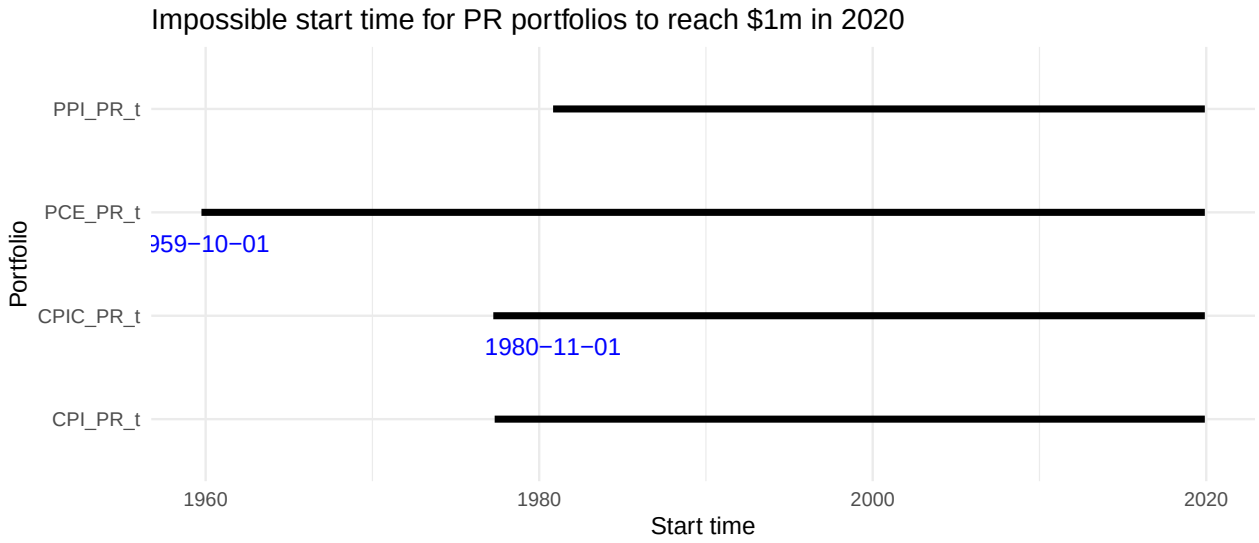

RS_GR_t
Mean:
48.7 years
Median:
48.7 years
40
30
20
10
0
count
44
48
52
56
Time to reach $1m in years

PCE_PR portfolio never reaches $1m from any starting time since 1959 Feb.









Contribute based on historical contribution limit

```
##     CPI_GR_terminal CPI_PR_terminal CPIC_GR_terminal CPIC_PR_terminal
## 1         664086.607      285500.254       653958.781       282688.747
## 13        619842.567      274018.737       610812.267       271492.870
## 25        576638.420      262287.670       568784.968       260081.340
## 37        539181.400      251684.656       532270.000       249744.588
## 49        500736.067      240320.986       494617.789       238615.677
## 61        456143.894      226472.237       451101.983       225101.719
## 73        414368.018      212790.041       410586.654       211833.339
## 85        376815.525      199830.873       374650.574       199432.199
## 97        457570.265      250149.689       456821.029       250394.582
## 109       409749.236      231839.573       410792.937       232770.054
## 121       368907.501      215357.866       371079.198       216743.048
## 133       330700.420      199217.916       333704.904       200954.431
## 145       300167.801      185748.865       303638.831       187691.121
## 157       274599.746      174001.738       278099.569       175956.025
## 169       248648.447      161633.341       251784.130       163414.096
```

```
## 181      225978.646      150426.584       228747.748       152025.898
## 193      205846.171      140073.093       208349.971       141536.185
## 205      188689.713      130924.985       191063.877       132318.933
## 217      171981.127      121708.855       174199.762       123016.723
## 229      157354.509      113386.771       159273.418       114523.995
## 241      143433.287      105232.783       145043.438       106189.082
## 253      130045.511       97162.657       131312.706        97912.213
## 265      117883.787       89634.170       118829.659        90184.748
## 277      108642.696       83773.959       109353.104        84175.303
## 289      100908.799       78768.249       101420.409        79040.848
## 301       95562.248       75250.976        95911.016        75416.413
## 313       91117.977       72284.782        91312.832        72347.511
## 325       86452.546       69129.817        86525.878        69110.396
## 337      122752.205       98954.381       122678.209        98799.266
## 349      114540.649       93251.977       114216.509        92923.205
## 361      104610.171       86239.482       104025.426        85726.718
## 373      128619.158      107163.510       127683.433       106367.618
## 385      117865.449       99270.881       116760.986        98351.055
## 397      107946.000       91854.246       106873.003        90958.075
## 409      123088.815      105791.826       121879.996       104772.860
## 421      108397.398       94346.543       107205.597        93340.487
## 433       90084.326       79742.479        88988.527        78813.223
## 445       76023.302       68261.290        75157.031        67519.622
## 457       64289.427       58473.902        63662.632        57932.164
## 469       57128.876       52729.717        56741.081        52390.966
## 481       46119.208       43130.986        45969.898        43000.178
## 493       36793.776       34824.809        36801.098        34833.405
## 505       28675.324       27440.090        28722.015        27484.399
## 517       20231.564       19589.469        20260.100        19616.862
## 529       13067.975       12786.283        13079.826        12797.812
## 541        6574.908        6498.719         6578.622         6502.326
##     PPI_GR_terminal PPI_PR_terminal PCE_GR_terminal PCE_PR_terminal
## 1        845291.512      349842.771      298455.000      143219.837
## 13       785556.140      334337.921      284023.792      139475.305
## 25       725138.615      317935.718      269735.269      135594.798
## 37       673322.666      303267.893      256575.303      131868.896
## 49       620163.883      287554.918      242470.971      127699.397
## 61       558536.295      268414.014      225645.044      122472.763
## 73       500347.738      249355.490      209799.959      117284.003
## 85       447915.385      231262.544      195691.286      112416.072
## 97       534597.674      285604.470      244201.010      143814.588
## 109      469749.429      260776.903      226189.413      136916.740
## 121      416140.179      239144.538      210104.213      130423.883
## 133      366691.924      218256.847      194158.701      123686.927
## 145      328299.969      201322.382      181039.433      117899.002
## 157      297639.058      187237.699      169528.813      112609.790
## 169      267429.308      172839.448      157369.197      106813.833
## 181      241036.440      159791.832      146256.769      101319.508
## 193      217527.271      147701.919      136153.757       96123.682
## 205      197866.436      137219.699      127493.354       91506.009
## 217      179196.847      126923.476      119118.055       86886.105
## 229      163523.773      118006.263      111531.105       82568.937
## 241      148766.060      109362.508      104106.314       78219.813
## 253      134718.468      100894.530       96711.951       73762.132
```

```
## 265      121915.350       92968.818       89828.244       69500.659
## 277      112210.557       86814.563       84467.248       66100.829
## 289      104224.415       81645.982       79843.189       63107.782
## 301       98930.919       78163.796       76519.323       60921.020
## 313       94666.380       75317.571       73612.014       58980.509
## 325       90059.177       72201.874       70443.583       56837.828
## 337      128291.474      103651.422      100776.404       81910.795
## 349      120597.692       98308.517       94913.092       77838.959
## 361      111002.644       91532.483       87670.870       72724.577
## 373      137193.170      114256.721      108671.170       91043.137
## 385      126102.617      106116.569      100245.298       84858.641
## 397      115602.831       98266.019       92281.532       78904.046
## 409      131790.687      113143.274      105703.937       91277.471
## 421      116387.854      101144.362       93704.533       81929.691
## 433       97147.470       85800.739       78945.870       70160.402
## 445       81770.354       73243.817       67536.189       60843.774
## 457       68557.839       62222.342       57842.271       52757.884
## 469       60065.296       55353.303       52216.272       48300.581
## 481       47697.811       44570.917       42835.773       40122.020
## 493       37458.849       35451.613       34715.718       32888.990
## 505       29030.885       27786.298       27387.373       26222.695
## 517       20620.460       19966.576       19569.366       18953.538
## 529       13346.274       13058.063       12762.008       12488.352
## 541        6689.952        6612.239        6487.489        6412.526
##     RS_GR_terminal
## 1       277915.675
## 13      266291.538
## 25      254565.414
## 37      244075.202
## 49      233289.222
## 61      220085.528
## 73      207120.226
## 85      194420.530
## 97      243584.457
## 109     225815.859
## 121     209704.981
## 133     194186.191
## 145     180650.179
## 157     169052.158
## 169     157151.816
## 181     146412.948
## 193     136411.127
## 205     127610.760
## 217     118351.165
## 229     110350.503
## 241     102589.857
## 253      94828.382
## 265      87636.565
## 277      82081.362
## 289      77307.333
## 301      73842.849
## 313      70878.232
## 325      67824.144
## 337      97118.769
```

```
## 349      91446.930
## 361      84485.544
## 373     104942.514
## 385      97325.052
## 397      90198.676
## 409     104144.323
## 421      92477.338
## 433      78346.756
## 445      67391.355
## 457      57463.520
## 469      51723.967
## 481      42132.318
## 493      33944.727
## 505      26719.882
## 517      19070.518
## 529      12455.951
## 541       6468.272
```