Chapter 3

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1 Chapter 3 - Fixed Income Risk

It's generally thought that an amount of money in the future is worth less than the same amount of money now, because one of the things you can do with money now is nothing. You can just wait for the future, and then do any of the things you could do with future money. So the set of things you can do with present money is a superset of the things you can do with money in the future, and therefore money in the future is worth less than money now. J. Wellington Wimpy, a character in 1930's *Popeye*[1] cartoons, was famous for his expression of the superiority of using money now for present consumption:

Unfortunately this common-sense argument in favor of present money is wrong. It is possible that the purchasing power of money can increase over time so what you can buy with \$100 today is less that what you will be able to buy with \$100 a year from now. In that case you can do more with money in the future than you can do with money today. This is *deflation*, which is rare but does sometimes happen, usually during bad economic times. The code in the next cell retrieves data from FRED, the database maintained by the Federal Reserve of St. Louis (part of the US central banking system; see section (3.1) below for an explanation of central banking). It shows wholesale prices from 1914 to 1968.

[1]Popeye is l' King Features Syndicate.

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In [15]: import qrbook_funcs as qf
         import matplotlib.pyplot as plt
         import numpy as np

         #FRED code for wholesale price series 1914-1968
         seriesnames=['M0448CUSM350NNBR']

         dates,prices=qf.GetFREDMatrix(seriesnames)

         ## Configure the graph
         x=np.arange(len(dates))
         plt.plot(x,prices)
         plt.title('Figure 3.1 - US Wholesale Prices')
         plt.xlabel('Date')
         plt.ylabel('Price Level')
```