

# Discussion of Robert King's Presentation, Boston Federal Reserve Bank, Oct 15, 2016

By Truman Bewley

- 1) The evidence used.
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- My remarks are based on interviews with over 550 businesspeople responsible for purchasing and price setting of goods and over 300 interviews on hiring, layoffs, and wage and salary setting, all in a great variety of companies. The interviews on the labor market took place in the 1990's. Those on prices took place from 1999 to 2015.

- 2) Two recent structural changes bearing on price inflation.
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- Two important structural changes occurred in the years shortly before and during my interviews on pricing. One was increasing concentration in retailing. The other was the increased use of long-term contracts that make prices a function of various indices. These changes may help explain the low rate of inflation during the current recovery.

- 3) Effects of retail concentration.
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- Huge, big box retailers resist increases in the prices they pay for manufactured goods, mainly by refusing to pay the increased prices. They resist because they have either to absorb the increases or pass them on to consumers, who will notice them, reduce purchases, and gain the impression that the retailer is high priced. Retailers believe that their reputation will be sullied by increases, even if competing retailers make similar increases. The resistance can be ferocious and is effective even against enormous manufacturers. The pressure against price increases is passed back through the chain of supply.

- The resistance to price increases applies only to manufactured goods that are stable in quality and that individual consumers purchase often enough that they are likely to notice a price increase. The resistance is strongest for goods that are labeled as price sensitive, which in the language of retailers means that so many consumers buy the good so often that many of them are likely to remember the price and use it to compare a retailer's pricing with that of competing retailers. Milk, lettuce, Tide detergent, and Crest toothpaste are examples for supermarkets. The resistance does not apply to appliances, computers, automobiles, and most durable goods, because each consumer buys them so infrequently that the prices experienced in previous purchases are either forgotten or irrelevant because of improvements in the good's quality. Furthermore many of these goods tend to decline in price because of technological improvements in production processes. Nor does the resistance apply to commodities purchased by retailers on highly competitive markets, such as perishable foods. Here a buyer with market power cannot successfully resist price increases. A large buyer might cause market prices to fall by reducing its purchases, but then it has less to sell. Restaurant chains, however, are so averse to price increases that they tend to make long-term fixed price contracts with agricultural cooperatives or with large individual growers of fruits and vegetables. They also make long-term fixed price contracts with manufacturers of products such as soybean oil. In such cases, the sellers tend to use futures markets to offset their price risk.

- Retailer resistance to price increases engenders manufacturers' resistance to any kind of cost increases. It is possible that this effect may strengthen the resistance of some manufacturers to wage and salary increases, though this impact is surely muted by the fact that for most manufacturers labor costs are a small fraction of their variable costs. Most variable costs are purchases of inputs from other firms.

- 4) Effects of price indexation.
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- Indexation is called formula based pricing in business. It makes transaction prices a function of some published number designed to reflect market conditions. The number can be the prompt price on some futures market, such as a market for natural gas. It can be a government index of industry costs. It can be an index of average spot market prices in some commodity, the average being calculated by a government agency or by a market reporting firm. Formula based pricing applies only to commodities, which in business parlance means a good of standardized quality and that is traded by a great many buyers and sellers. Among hundreds of examples are crude oil, natural gas, petrochemicals, coal, many grades of steel, lumber, hogs, pork, chicken, eggs, and milk.

- One of the causes of the increased use of indexation appears to be increased concentration. Very large buyers and sellers find it economical to integrate their production processes to some extent, and such integration makes it difficult to switch partners. Since bargaining over price inevitably involves threats to buy or sell elsewhere, the partners are pushed to agree on a long-term contract that determines price.



- Such long-term contracts could fix the price to be some constant. Apparently in the past, most pricing contracts did fix prices, and some still do, especially those where restaurant chains are the buyers. There has been, however, a trend to substitute formula based pricing for fixed prices. The reason given for that change is increased price volatility. Volatility tends to make fixed price contracts unworkable, as one side or the other may be driven to violate or abrogate the contract, and volatility makes it expensive to use futures markets to offset price risk. Nobody has a good explanation for why volatility has increased.

- Increased indexation probably increases the macroeconomic impact of fluctuations in commodity markets, so that commodity market declines depress the general price level more than they did two or three decades ago.

- 5) Effects of Inflation Expectations

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- Nobody I interviewed about the pricing of goods mentioned expectations about inflation or future Federal Reserve policy as a factor, and questions along these lines provoked ridicule. Reasons for this reaction are perhaps that immediate concerns dominate thinking about prices and most prices can be changed quickly. There are long-term fixed price contracts, and one would think that anticipated inflation would influence the choice of their prices. These contracts often apply to commodities with futures markets, and the negotiation of such prices seems to be more strongly influenced by long-term futures prices than anticipated inflation. However, inflation expectations no doubt affect the futures prices, so that the impact of futures markets on long-term fixed prices may be one avenue by which inflation expectations affect prices. It is not clear that this effect would be large at a macroeconomic level, since long-term fixed price contracts seem to be restricted largely to the restaurant industry.

- Another avenue is through the impact of inflation expectations on wage and salary increases. Labor compensation is usually fixed annually, and in non-union firms annual increases are based on factors such as merit, what it is thought firms competing for similar labor will pay, and on expected increases in the cost of living. Employers tend to inform themselves about increases by competing employers either through direct contact or through surveys of compensation intentions, so that expectations about future market pay rates are probably not an important independent factor determining compensation, but are generated endogenously by current employer decisions. The expected cost of living increase becomes an important independent factor, if it is large relative to average increases that are given for other reasons, such as merit and increased experience or training. Hence large expected increases in the cost of living could have an important impact on wage and salary increases. However in considering this impact, it is important to realize that it is diminished by labor turnover savings. Employees who quit or retire are usually paid more than new hires, since each employee's pay tends to increase while working for a firm. Hence labor turnover usually causes a firm's average annual per employee pay increase to be less than the annual increase granted to individual employees.

- 6) Downward price rigidity
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- Retailers resist cost increases by their suppliers in part because it is difficult for retailers to raise their own regular prices without risking losing sales or even customers, where by the regular price I mean the price before promotional discounting. The difficulty of raising regular prices makes retailers reluctant to reduce them, the argument being that it would be hard later to raise reduced prices back up. The reluctance to reduce prices leads to downward price rigidity, though the rigidity is not absolute. Retailers adjust regular prices frequently up and down in response to cost changes, though such adjustments apply mainly to goods not judged to be price sensitive.

- The downward price rigidity applies even more strongly to manufacturers. They are reluctant to reduce prices, because it is so difficult to persuade large retail chains to accept the cost increases that might be needed later.

- This downward price rigidity probably plays little role in allowing business downturns to occur, because it applies mainly to goods whose sales are little affected by downturns. For instance, supermarkets claim they do as well or better during recessions than booms, because downturns cause consumers to switch from restaurant to home cooked meals. Downward price rigidity applies especially to the restaurant industry, yet parts of that industry, such as quick service restaurants, may benefit from downturns. Hard-pressed consumers tend to substitute fast food for meals in middle level restaurants.

- The prices of durable goods seem not to be as downwardly rigid as those of the inexpensive manufactured items discussed above. The downward rigidity that does exist seems to stem from floors on production costs rather than concern about consumer reactions to future price increases, and these floors seem to be due to downward wage and salary rigidity. The downward flexibility that exists does not necessarily stimulate the economy. For instance, house prices can fall during a recession, but what is crucial for house construction is the difference between house prices and construction costs, and these costs did not decline during the recent recession.



- 7) The Phillips Curve

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- The upper price rigidity evident for some classes of manufactured consumer goods does not apply to wages and salaries. When faced with labor shortages, firms will raise pay rates for new hires sharply if need be to attract labor. The increases in pay for new hires entrain increases for existing employees in order to maintain internal pay equity. Part of the explanation for the recent lack of inflation is probably the absence of a generalized labor shortage that would push the pay of new hires upward.