PERKINS
CAPITAL
MANAGEMENT, INC.

August 9, 2022

Dear PCM Clients and Friends:

First and foremost, we hope this letter finds you, your family, and loved ones healthy and safe. We hope you are enjoying the summer months.

In Minnesota, this summer came late. It was about a month behind what we would expect. Summer is now in full bloom. We have had a wonderful July, look forward to August and then into Fall. In Wayzata, there are people out everywhere. The streets are crowded. Restaurants are busy. Our brick front steps and entry, covered in ivy, continue to be a popular “selfie” and group photo spot.

In our May letter, we acknowledged that as investors it would be totally human and normal to feel exhausted by all that has gone on during the past two and a half years.

Investing by its very nature requires us to submit to variables we can neither predict nor control. World events, government policies, interest rates, taxation, inflation, and the business cycle are forces that continually act upon our investments.

The current upfront issue for the markets today is the recession concern. We have already met the negative two quarter definition of a recession. It is likely we will meet further recession markers. It is likely that parts of the economy, the most interest rate sensitive sectors, will continue to struggle. Yet, despite recession concerns from many economists, economic activity is robust, hiring is increasing, consumers are financially strong, and corporations are doing well with strong balance sheets. Importantly, the equity markets are forward-looking and have a well-documented history of turning positive before a recession ends. History shows that what happens in the headlines today has often already been played out in the stock market months ago.

We are thinking that now is a time to “look across the valley.” We think we are in a period of continuing “big picture” concerns well into 2023 where some businesses will do well and others won’t. Today there are many special “best in class” growth companies which are down dramatically in price, attractively valued, have already had their correction and represent investment opportunity. There are other companies with more interest rate or economically sensitive businesses which may struggle in a slower economy. We see opportunity within a split market; some businesses continuing to grow, while others may not.

We feel we have work to do as we continue to review and question what we are invested in for you, rebalancing where needed, selling where we feel businesses have not met our expectations, and investing in companies which are down significantly, have established growing business plans and are attractively priced.

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THE MARKET SCOREBOARD

The S&P 500 continued to decline in the second quarter, hitting the lowest level since December 2020 as still-high inflation, sharp increases in interest rates, rising recession risks, and ongoing geopolitical unrest pressured stocks. Extreme investor concern over high inflation and rising interest rates resulted in the worst S&P performance in decades.

After a rebound in March, the S&P 500 dropped sharply in April to start the second quarter with the S&P 500 declining -8.7%. While some of the reasons for the declines were similar to the first quarter (rising rates, high inflation, geopolitical concerns) the primary catalyst for the April selloff was something new -- a massive COVID-related lockdown in China.

The selling continued in early May, as the Federal Reserve raised interest rates by 50 basis points at the May 4 meeting, the single biggest rate hike in 22 years. Additionally, at the press conference, Fed Chair Jerome Powell clearly signaled that the Fed would continue to hike rates aggressively to tame inflation and that weighed on stocks, pressuring the S&P 500 to fall to new 2022 lows in mid-May. Deep short-term oversold conditions in equity markets, prompted a solid rally in late May and the S&P 500 finished the month with a fractional gain.

But the relief didn't last long. On June 10, the May CPI report showed inflation had not yet peaked as CPI rose 8.6% year-over-year, the highest reading since 1982. That prompted a violent reversal of the late-May gains, and the selling and market volatility was compounded when the Federal Reserve increased interest rates by 75 basis points on June 15, the biggest rate hike since 1994. Additionally, Fed Chair Powell again warned that similar rate hikes were possible in the coming months. The high CPI reading combined with the greater-than-expected rate hike hit stocks hard, and the S&P 500 dropped sharply in mid-June to its lowest level since December 2020.

Indexes	% Return YTD 2022	% Return Q2 2022	% Return Q1 2022
Dow Jones Industrial Average	-15.31	-11.25	-4.57
NYSE Composite	-15.59	-13.10	-2.87
S&P 500 Total Return	-16.68	-14.36	-2.72
Wilshire 5000	-22.49	-17.63	-5.89
NASDAQ Composite	-29.51	-22.44	-9.10

All four major stock indices posted negative returns for the second straight quarter. The continued rotation from high valuation, growth-sensitive tech stocks to sectors of the market that are more resilient to rising rates and slowing economic growth was the reason for the tech-heavy Nasdaq's dramatic underperformance compared to the Dow Jones Industrial Average relative outperformance. The S&P 500 finished with its worst first-half performance since 1970.

By market capitalization, large-cap stocks again outperformed small-cap stocks which in turn outperformed micro-cap stocks. On a sector level, all 11 S&P 500 sectors finished the second quarter with negative returns. Relative outperformers included traditionally defensive sectors such as utilities, consumer staples, and healthcare.

The declines are understandable considering inflation reached a 40-year high, the Federal Reserve raised interest rates at the fastest pace in decades, the world's second-largest economy effectively shut down and the Russia-Ukraine war raged on.

While the volatility and market declines of the first six months of 2022 have been unsettling and painful, with the decline the S&P 500 and other common stock valuations are now at much more historically attractive valuation levels. At current prices, a lot of negativities have been priced into the market, opening the possibility of positive surprises as we move forward in 2022.

In sum, the factors that pressured stocks in the first quarter, including high inflation, the prospect of sharply higher interest rates, geopolitical unrest, and rising recession fears, also weighed on stocks in the second quarter giving investors no relief from these headwinds and markets remained volatile.

STOCK MARKET OBSERVATIONS

Numerous shocks to the economy have legitimately pressured asset prices and created a complicated investment horizon the first six months of the year. This environment will continue. As we said in last quarter's letter: "As we look forward into 2022 it appears, at this time, that several "big picture" concerns: Ukraine, China, the midterm elections, the Fed and interest rates, significant price inflation, supply chain disruptions and the effect of all of this on corporate earnings will continue for the rest of the year and beyond." These "concerns" continue. Interestingly, the stock market has again been an effective leading indicator of the economy. We think market sentiment is very negative at the moment, and a lot of potential "bad news" has been at least partially priced into stocks and bonds at these levels. This creates the opportunity for potential positive surprises.

Inflation has been described as the worst since 1981. It may, perhaps, worsen; though at this time we continue to see signs of lower or tapering increases. We think price increases should cool next year as the effects of higher interest rates are felt. Despite the initial "jawboning" reaction, the true effects of the Fed's actions to slow the economy are always felt more as several quarters pass.

The current earnings reporting season is half over and was better than expected again. With 55.0% of S&P companies having reported earnings, 75% beat their estimates. At this time, we are not seeing any signs of an "earnings recession" which is usually defined as two quarters in a row of corporate profits below their year earlier level. Consensus S&P 500 earnings estimates could surely come down; but at this time consensus is for a 7% increase in 2023. That means the recent pullback in stocks after the Federal Reserve interest rate changes has moved the valuation of equities lower to more attractive levels. Today's P/Es based on next year's earnings are around 8% lower than the past 5-year average and down over 27% from the five-year high in 2020.

As a group, the companies we are invested in appear to be doing fine. Some actually did quite well in this environment. This prompts the question, then, if the economic outlook is so fraught, why aren't earnings estimates coming down? Few of the companies we are invested in are guiding expectations lower. Rather, most companies are affirming expectations for a good second half of the year and are also experiencing positive top line growth.

There is an old wall street saying: "The market is bottoming when the market does not go down on bad news." Lately, the market is taking all the negative news in stride and it appears, at this time, the market has put in "a" bottom and we are having a summer rally. On June 16, the markets ended a selling streak where in five out of seven trading days 90% of S&P 500 stocks closed lower. This was historic one-sided negativity and marked "a" bottom.

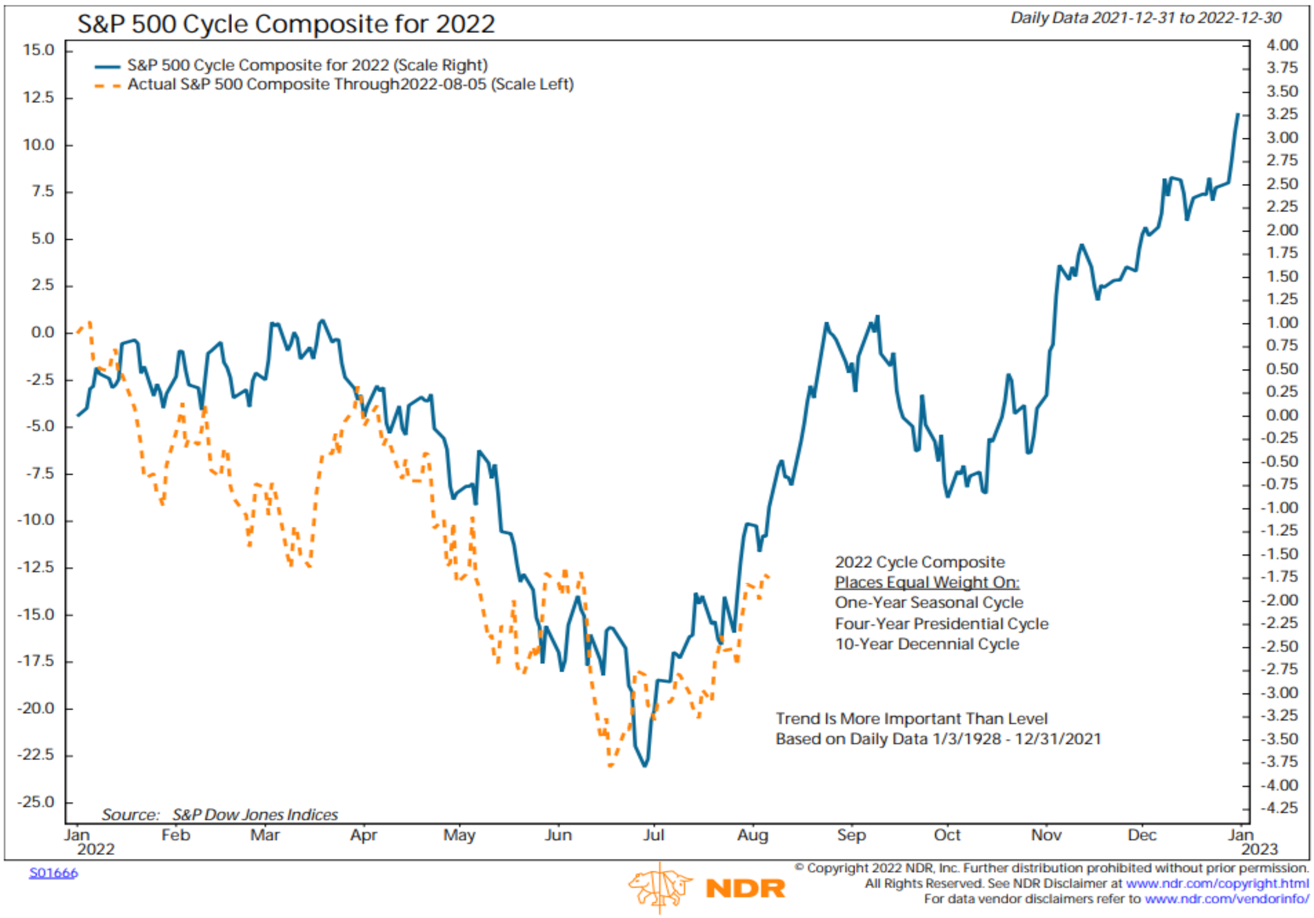
Although August and September are often two of the more challenging months for the markets and October, the pre-election month, has been a month when final selloffs and bottoms occur; the markets are at this time giving us a summer rally off the lows. One of the best predictors of the market is the action of the market itself. It is too early to say with any conviction and credibility if the mid-June lows are "the final lows" in the averages for this bear market correction or "a" low along the way to making a bottom. Though, we do want to optimistically say that when we look at the price charts of our investments we find many which are down dramatically, now building post-bottom bases, doing well fundamentally as we listen to their earnings reports (or meet with them) and are clearly at the beginning of a solid recovery.

Piper Sandler, in their July 2022 Informed Investor, reported a better second half market has followed the toughest 5 first half markets on record. Piper Sandler's historical observation was:

> *"The SPX wrapped up the first half of the year with a -20.6% decline. This marked the worst start to the year since 1970 and the fourth worst on record. Fortunately, history provides some signs of a potential glass half full setup for the second half. Following the five worst halves on record, which range from -45.0% to -17.4%, we found that the SPX advanced 5 for 5 in the second half and produced respective average and median returns of 23.8% and 15.3%. The recessions in 1932 and 1970 did not stop the second half recovery."*

In our last letter we mentioned, when discussing the Ned Davis Research cycle research, how midterm election years have been on average the weakest year of the four-year presidential cycle and that midterm years have often been years with elongated corrections; often ending near to when the election uncertainty is resolved in late Q3 or Q4.

Shown below, we again include the important cycle work of Ned Davis Research and include a copy of their S&P 500 Cycle Composite for 2022. NDR's Cycle Composite for the S&P 500 offers a unique roadmap on how a year could play out. They emphasize that the Cycle Composite is not a forecast. Rather to think of it as history's guide for how the year could unfold.



The composite for 2022 (the blue line) shows a strong second half. The dashed orange line shows the S&P 500 through August 5. As we have written before it is a composite of three cycles: the one-year cycle, the four-year cycle (for 2022 the mid-term year) and the ten-year cycle (years ending in two this year). The composite averages the volatility of almost 100 years of data. NDR has also always included the note that trend is more important than level. Some years the cycle composite tracks the indexes closely and other years it has not.

Each component of the cycle is interesting. The one-year cycle portion of the composite shows how the markets often start the year with a rally, have a spring pullback, a summer rally, a longer autumn correction and a year-end rally. Of importance this year, as mentioned, is the influence of the midterm cycle which has a declining market until before the elections into October. The composite is an effort to average several cycles into one.

As always, if you have any questions about your accounts, any of your specific investments, or any of the companies you are invested in, please give us a call. Or call in and ask to schedule a time to talk.

We have also had several clients come into the office again and we welcome this. We are always willing to answer your questions.

The cartoon speaks to the correction which has occurred during the past 18 months in high-tech growth companies.

Sincerely,

Richard C. Perkins, C.F.A.
President
Portfolio Manager

Daniel S. Perkins, C.F.A.
Chief Operating Officer
Portfolio Manager

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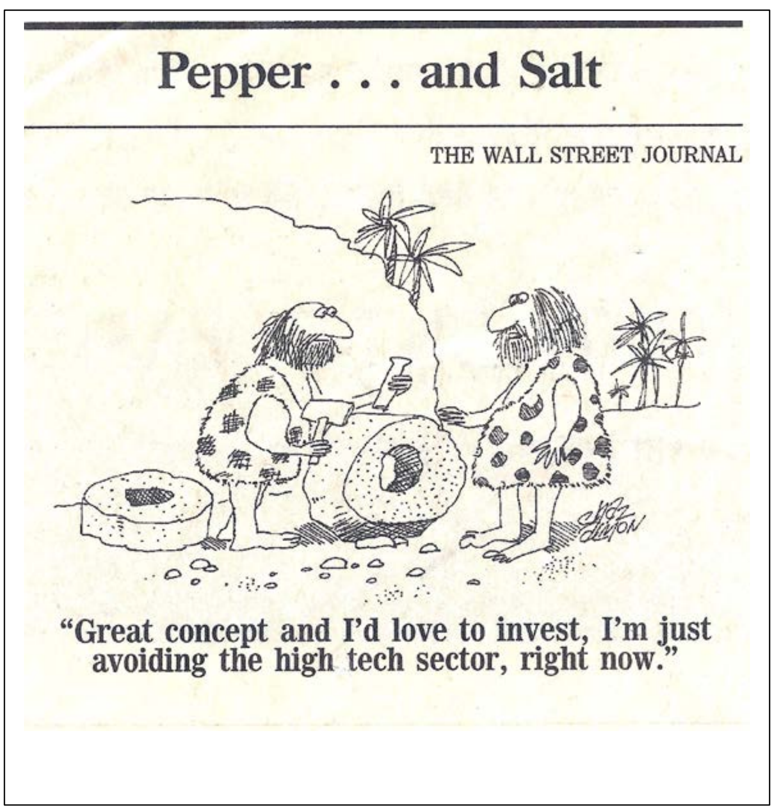


"Great concept and I'd love to invest, I'm just avoiding the high tech sector, right now."

HIGH URINALS

A group of 3rd, 4th and 5th graders, accompanied by two female teachers, went on a field trip to the local racetrack (Churchill Downs) to learn about thoroughbred horses and the supporting industry, but mostly to see the horses.

When it was time to take the children to the bathroom, it was decided that the girls would go with one teacher and the boys would go with the other. The teacher assigned to the boys was waiting outside the men’s room when one of the boys came out and told her that none of them could reach the urinal.

Having no choice, she went inside, helped the boys with their pants, and began hoisting the little boys up one by one.

As she lifted one, she couldn't help but notice that he was unusually well endowed. Trying not to show that she was staring the teacher said, “You must be in the fifth grade.” “No, ma'am,” he replied. “I'm riding Silver Arrow in the seventh race, but I appreciate your help.”

MURPHY’S LAW

If anything can go wrong, it will.

Nothing is as easy as it looks.

Everything takes longer than you think.

If there is a possibility of several things going wrong, the one that will cause you the most damage will be the one to go wrong.

If you perceive that there are four possible ways in which a procedure can go wrong, and circumvent these, then a fifth way will promptly develop.

Left to themselves, things tend to go from bad to worse.

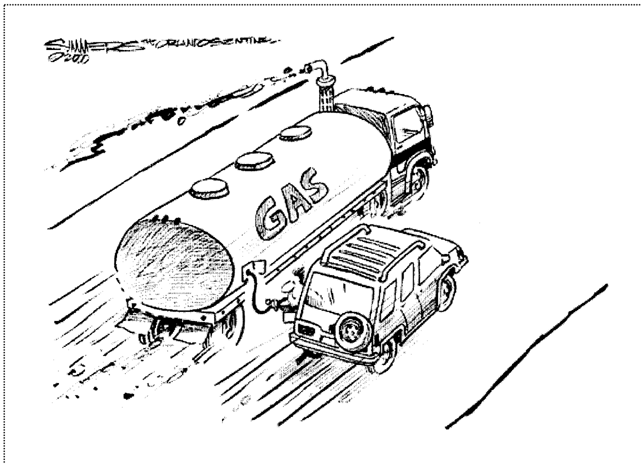
Whenever you set out to do something, something else must be done first.

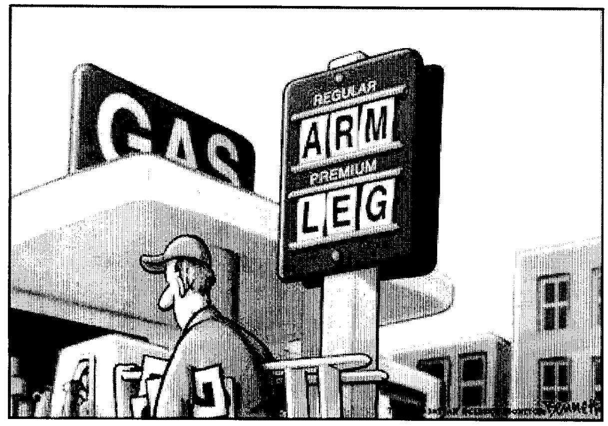
Every solution breeds new problems.

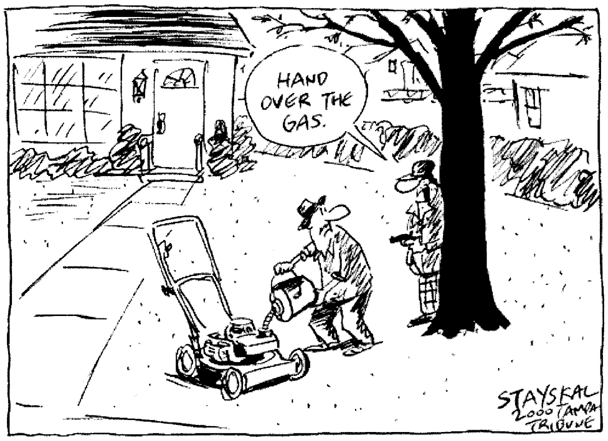
Nature always sides with the hidden flaw.

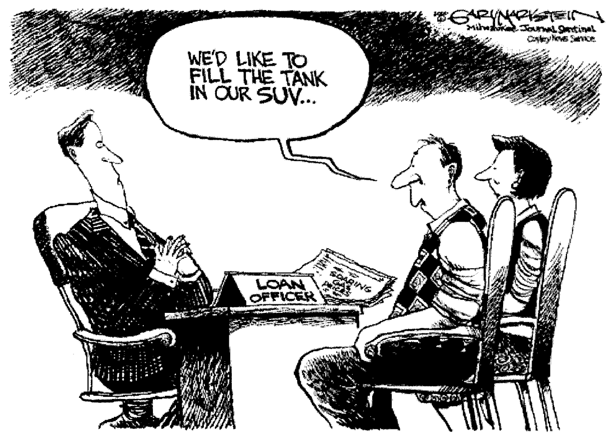
Mother nature is a bitch.

Smile…tomorrow will be worse.









ANSWERS TO TEST QUESTIONS OR WHY TEACHERS DRINK

Q: Briefly explain what hard water is.
A: Ice.

Q: Name one of the early Romans' greatest achievements.
A: Learning to speak Latin.

Q: Name six animals which live specifically in the Arctic.
A: Two polar bears and four seals.

Q: Name the wife of Orpheus, whom he attempted to save from the underworld.
A: Mrs. Orpheus.

Q: Where was the American Declaration of Independence signed?
A: At the bottom.

Q: What is a fibula?
A: A little lie.

WHY WE LOVE CHILDREN

<u>OPINIONS</u>
On the first day of school, a first-grader handed his teacher a note from his mother. The note read, “The opinions expressed by this child are not necessarily those of his parents.”

<u>KETCHUP</u>
A woman was trying hard to get the ketchup out of the jar. During her struggle the phone rang so she asked her 4-year-old daughter to answer the phone. “Mommy can't come to the phone to talk to you right now. She’s hitting the bottle.”

<u>NUDITY</u>
A little boy got lost at the YMCA and found himself in the women's locker room. When he was spotted, the room burst into shrieks, with ladies grabbing towels and running for cover. The little boy watched in amazement and then asked, “What’s the matter, haven’t you ever seen a little boy before?”

<u>DRESS-UP</u>
A little girl was watching her parents dress for a party. When she saw her dad donning his tuxedo, she warned, “Daddy, you shouldn’t wear that suit.” “And why not, darling?” “You know that it always gives you a headache the next morning.”

<u>DEATH</u>
While walking along the sidewalk in front of his church, our minister heard the intoning of a prayer that nearly made his collar wilt. Apparently, his 5-year-old son and his playmates had found a dead robin. Feeling that proper burial should be performed, they had secured a small box and cotton batting, then dug a hole and made ready for the disposal of the deceased. The minister's son was chosen to say the appropriate prayers and with sonorous dignity intoned his version of what he thought his father always said: “Glory be unto the Faaather, and unto the Sonnn, and into the hole hegoooes.”

<u>SCHOOL</u>
A little boy had just finished his first week of school. “I'm just wasting my time,” he said to his mother. “I can’t read, I can’t write, and they won’t let me talk!”

<u>BIBLE</u>
A little boy opened the big family, Bible. He was fascinated as he fingered through the old pages. Suddenly, something fell out of the Bible. He picked up the object and looked at it. What he saw was an old leaf that had been pressed in between the pages. “Mama, look what I found,' the boy called out.” “What have you got there, dear?” With astonishment in the young boy’s voice, he answered, “I think it’s Adam’s underwear!”

WRONG SIDE OF THE BED

Mother Superior was on her way to late morning prayers, when she passed two novices just leaving early morning prayers, on their way to classes. As she passed the young ladies, Mother Superior said, "Good morning, ladies."

The novices replied, "Good morning, Mother Superior, may God be with you." But after they had passed, Mother Superior heard one say to the other, "I think she got out of the wrong side of the bed this morning." This startled Mother Superior, but she chose not to pursue it.

A little further down the hall, Mother Superior passed two of the sisters who had been teaching at the convent for several years. She greeted them with, "Good morning, Sister Martha, Sister Jessica, may God give you wisdom for our students today." "Good morning, Mother Superior. Thank you, and may God be with you."

But again, after passing, Mother Superior overheard, "She got out of the wrong side of bed today." Baffled, she started to wonder if she had spoken harshly, or with an irritated look on her face. She vowed to be more pleasant.

Looking down the hall, Mother Superior saw retired Sister Mary approaching, step by step, with her walker. As Sister Mary was rather deaf, Mother Superior had plenty of time to arrange a pleasant smile on her face, before greeting Sister Mary. "Good morning, Sister Mary. I'm so happy to see you up and about. I pray God watches over you today, and grants you a wonderful day."

"Ah, good morning, Mother Superior, and thank you. I see you got up on the wrong side of bed this morning." Mother Superior was floored! "Sister Mary, what have I done wrong? I have tried to be pleasant, but three times already today, people have said that about me."

Sister Mary stopped her walker, and looked Mother Superior in the face. "Oh, don't take it personally, Mother Superior. It's just that you're wearing Father Murphy's slippers."

HIGHWAY WORKERS

A farmer sitting on his porch noticed a highway department truck pull over on the road's shoulder. A man got out, dug a sizeable hole in the ditch, and got back in the vehicle. A few minutes later, the other occupant of the truck got out, filled up the hole, tamped the dirt, got back in the truck. Then they drove forward on the shoulder about 50 yards and repeated the process--digging, waiting, refilling.

After a half dozen repetitions, the farmer sauntered over to them. "What are you doing?" he asked. "We're on a highway beautification project," the driver said. "And the guy who puts the tree in the hole is home sick today."