



## Economy Will Slow, but Opportunities Remain

This is the time of year when economists look into their crystal balls and tell us what to expect. The path of the economy, like the weather, is not easy to pinpoint, and the results rarely accurate more than a few months out. So why should you care?

The answer, in a nutshell, is that even though economists are not always accurate, they can usually identify the economy's pressure points. By keeping an eye on potential weaknesses, you can plan for potential problems instead of letting them sneak up on you.

Right now, there is plenty to think about. After growing rapidly in mid-2007, growth slowed sharply going into the fall. Now economists are debating whether we are headed for a recession.

### Mortgages

Housing appears the key to the 2008 economy. For six years, the nation has enjoyed a housing boom that lifted the value of the average home nearly 50 percent. In some states, like Arizona, California, Florida, and Nevada, prices rose more than 80 percent.

Everyone wanted to get into a home before prices rose beyond their reach. They were helped by cheap mortgages. Interest rates were low, and adjustable-rate mortgages (ARMs) made them even lower. Buyers didn't need a down payment. If they had poor credit, they could get a subprime mortgage.

Now those ARM rates are readjusting, sometimes to much higher payments than homeowners can afford. An estimated 750,000 homes were foreclosed in 2007. Other families are hoping to sell their homes to get out of bad deals.

As a result, economists are predicting average U.S. home prices will fall anywhere from 10 percent to 40 percent through 2009, their first decline since 1933. Mortgages have become harder to get, and the number of homes on the market nearly doubled from 2006.

For most consumers, their home is their biggest asset. They borrow from it, pay college tuition

with it, and plan to retire on it. The falling housing market is emptying that bank account. No wonder the Conference Board's Consumer Confidence survey dropped to 87 in November from more than 110 four months earlier. Economists think consumer caution about big-ticket purchases will slow growth in 2008.

### Credit Issues

Mortgage problems depress consumer spending. They have also begun to affect business credit. Here's why.

In the past, banks renegotiated home loans and foreclosed only when all else failed. This time around, however, many subprime loans were combined with conventional mortgages and sold to investors, much like stocks or bonds. So who authorizes a change in loan terms? The broker who sold the original mortgage? The securities firm that packaged it? The investor who now owns it?

No one knows. About \$500 billion of these securities were sold during the first half of 2007 alone. The banks and investors that bought them are now wondering about the true value of these securities. Some major banks have written off billions of dollars on mortgage-backed securities. Others have pulled back on lending to all but their best customers.

### The Good News

This sounds pretty bad, but housing is only a small part of America's \$14 trillion economy. And some parts of the economy continue to look good. Corporate profits remain strong. Jobs, while not growing as fast as in 2006, are still growing.

The weak dollar makes U.S. exports cheaper, and exports added twice as much to the U.S. economy in 2007 as the decline in construction subtracted. Oil prices are not likely to go much higher, and inflation remains under control. The Democrats and Republicans may even devise a bill to simplify renegotiating failing mortgages.

Meanwhile, there are some steps you can take to prepare for the worst.

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# How Healthy Is Your Medical Insurance?

The past few years have been rough on businesses that offer healthcare insurance. Since 2001, costs have risen nearly 80 percent, four times faster than inflation. The burden falls heavily on smaller companies.

For larger companies, insurers spread their risk over hundreds or even thousands of employees. If an employee needs treatment for a stroke or cancer, the cost is offset by hundreds of healthy members. In a small business, a serious illness often leads to sharp increases in cost.

More than 99 percent of companies with more than 200 employees offered medical insurance in 2007, according to a recent survey funded by the Kaiser Family Foundation. Only 59 percent of smaller firms did, and only 45 percent of firms with three to nine workers.

Over the years, small businesses have become experts at containing costs. Among the common strategies: increase employees' share of insurance, prescriptions, and co-payments; raise deductibles; reduce coverage; and shift to plans with higher deductibles.

## New Alternatives

Business owners have several new alternatives to contain insurance costs. One alternative is consumer-driven healthcare. The idea behind it is simple. First, employees receive a high-deductible medical plan. It does not begin to pay for services until you have already spent \$1,100 (or more, depending on the plan) on doctors, hospitals, prescriptions, and other expenses.

The good news is that employees also receive a healthcare savings account (HSA). The business and/or employees fund the HSA with tax-free dollars. Employees then use the money to pay for medical expenses.

Businesses pay less for high-deductible policies, even after they fund worker HSAs. They can choose from several types of HSA plans. In some, employees can roll over unspent HSA money for future medical expenses and keep the account when they retire.

Insurance companies like the plans because they make policyholders consider cost. Patients may ask for generic drugs or delay a new pair of glasses until next year (though they may also skip needed care to save money).

Another low-cost alternative is the exclusive provider organization (EPO). It reimburses employees only for EPO doctors. If employees go out of the plan's network, they must pay on their own.

Caterpillar expects to save \$700 million by 2015 from a wellness program to improve

employee health. Getting workers to exercise, stop smoking, or deal with other medical issues can reduce the chance of a serious illness that sends your premiums skyrocketing.

## Keeping Costs in Check

Kristen Beeman and Shauna Gilbert have some additional advice on cutting insurance costs. They are vice presidents at Heffeman Insurance, a Walnut Creek, Calif., firm specializing in insurance for industrial cleaners.

**Work with a specialist.** Find a broker that specializes in health insurance. A national broker like Heffeman is licensed in 50 states. It can provide packages with both business and health policies. Local brokers, on the other hand, have detailed information on which plans best cover the doctors and hospitals in your area.

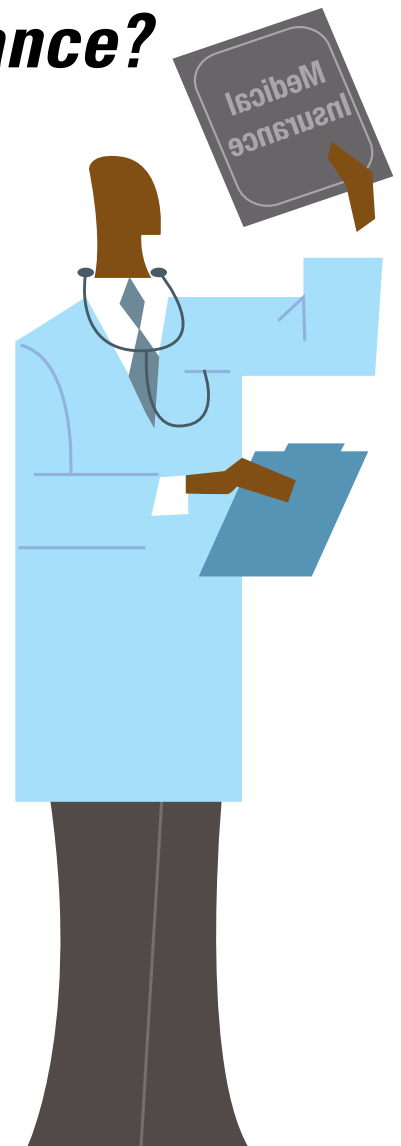
**Pick a carrier.** Make sure your insurance carrier is healthy, too. AM Best, S&P, Moody's, and Weiss all rate carriers' financial stability. Heffeman, for example, does not recommend carriers that receive less than a B-

**Pick a plan.** If you run a business, you probably know more about healthcare plans than you would prefer. Still, examine your options. If you want to deduct healthcare expenses from taxes, you must offer a plan to everyone in the company. You can offer more than one plan, but you must pay a fixed percentage or fixed dollar amount of each plan.

**Cut where you can.** In the end, the purpose of healthcare is to make sure employees can pay medical bills in a real emergency. There are several ways to trim costs while ensuring no one has to sell his or her home to pay for care.

Beeman says there are several ways to control costs: (1) Consider eliminating some benefits, like dental or vision; (2) Change the deductible, the amount of money spent before insurance kicks in; (3) Readjust co-insurance, the amount of the bill the insurance company pays (usually 70 percent or 80 percent); (4) Increase maximum out-of-pocket expenses, money spent in a calendar year before insurance starts picking up 100 percent of the tab; and (5) Consider less-costly consumer-driven healthcare plans.

Is this a perfect solution? Of course not. But as Beeman points out, "At least employees know that in a worst-case scenario, they'll be covered."



“ In a small business, a serious illness often leads to sharp increases in cost. ”

# Why High Pressure Is Not Enough

It is easy to buy into the argument that more pressure is always better. After all, since high pressure cuts tougher deposits, why not use it to remove softer deposits as well?

Yet the truth is that higher pressure does not always make a job go faster. In fact, it can reduce productivity. The key to getting the most out of your waterblaster is knowing when you need high pressure and when you need high flow.

Which one works better? “They’re two different things,” explains Jetstream Regional Sales Manager James Lobusch. “It’s like driving a car. First gear is high torque but low speed, and you need it to take a load up a hill. Overdrive is high speed and low torque, and you need it to cruise down a highway.

“Neither pressure nor flow is better,” says Lobusch. “It just depends on what you’re doing. The same is true of cleaning. To be productive, you have to apply the right combination of the two.”

## Pressure and Flow Basics

Pressure is cutting force. The higher the pressure, the greater the impact of the water on the surface, and the harder the deposits it will cut.

Flow is production rate. Assuming equal pressures, higher flow does the job faster. “Imagine two guys cleaning their driveways,” says Lobusch. “If one uses a garden hose at 5 gpm and the other uses a pressure hose at 25 gpm, the second guy will finish much sooner.”

In an ideal world, contractors could maximize both pressure and flow. In the real world, however, you have to give up one to get the other. So how do you know which one you need?

The key to cleaning productivity is to determine the minimum pressure needed to cut a deposit. Most experienced operators can get a good read on cleaning pressures by testing the surface with a screwdriver or pocket knife. If the film feels soft and gummy, it will usually come off with low pressure. If it appears hard and brittle, you will need higher cutting forces.



“...higher pressure does not always make a job go faster.”

Once you’ve got an estimate, it takes trial-and-error testing to find the right pressure. Once you’ve found the pressure, boost the water flow as high as possible to get the job done quickly.

## Pressure Drops

Setting up a job is rarely this easy. The reason? Most setups force you to make compromises and deal with pressure drops. “The pressure at the nozzle is always less than at the pump,” says Lobusch. “That loss can be low or substantial. Simply changing a tip or a hose can make a big difference in outcomes.” Lobusch gives two examples:

**Heat exchanger.** Imagine you have a 150-hp, 25-gpm, 10,000-psi waterblaster with 100-foot-long, 1/2-inch supply hose. You want to clean a 40-foot-long heat exchanger bundle of 11/16-inch ID tubes. You choose a 50-foot-long flex lance with a 1/8-inch (5/2) ID and 1/2-inch OD. This gives you a 1/8-inch gap between the hose/nozzle and tube for water and loose material to flow away.

If the deposit seems soft, use an 11-gpm flow nozzle. At 11 gpm, the pressure drops 350 psi along the 100-foot hose and 6,000 psi along the 50-foot lance. That leaves 3,650 psi (10,000 psi minus 6,350 psi) to remove the gummy buildup inside the tubes.

For harder buildup, go with a 7-gpm nozzle. Lower flow reduces the pressure drop to 200 psi along the hose and 3,000 psi along the lance. The nozzle now delivers 6,800 psi. This cuts through the deposits, although the lower flow will not remove debris as fast as the higher flow removes the soft deposit.

**Tank cleaning.** Now consider tank cleaning. To maximize the reach of the 3D head, you select nozzles that use 45 gpm. Your equipment is a 335-hp, 50-gpm, 10,000-psi waterblaster. You need to run 400 feet of 1/2-inch hose to reach the tank.

The problem here is the pressure drop along the 400-foot-long hose. At 45 gpm, it falls 8,000 psi. This leaves you with 2,000 psi at 45 gpm. This

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## Economy Will Slow, but Opportunities Remain – continued

**Talk with your bank.** Now is the time to get together with your accountant and then your banker. First, clean up your books as best you can. Banks only make money if they lend money, so make sure you’re the type of customer they want.

Second, question your banker. Ask if your bank invested in mortgage-backed securities and how that will affect lending practices. See if loan and line of credit terms have changed. Determine your backup financing plan before you need to borrow money.

**Talk with your customers.** How is the economy

affecting your customers? When demand falls, some plants take maintenance shutdowns and do maintenance they have put off for years. This could be an opportunity. Others may need ongoing maintenance to keep up with export demand. Call now and see how their year is shaping up.

**Invest in energy savings.** Oil is not likely to return to \$20 per barrel, though experts think it will drop to \$80 this year. This means high diesel and gasoline prices are here to stay. If you have an older vacuum truck or inefficient waterblaster, a new, energy-efficient unit could save you money for years to come.

# Tips on New Ultra-Low-Sulfur Engines

The new EPA-compliant diesel chassis have been on the road for the past year. They slash emissions by 90 percent for particulates and more than 50 percent for NOx and hydrocarbons. To do it, though, manufacturers have had to change exhaust systems, filters, cooling packages, and fuel and oil requirements. Here's a quick run-down on what those changes mean for you.

**Only use ultra-low-sulfur fuel.** Ultra-low-sulfur costs a few pennies more, but it could cost you thousands of dollars if you do not use it. The new chassis are optimized for ultra-low-sulfur fuel. Anything else will attack and foul your engine and filters, leading to costly repairs. And never, ever blend kerosene – which has high sulfur – with your fuel.

**Don't worry about lubrication.** Sulfur is a natural lubricant. Some drivers were concerned that removing it would cause engines to wear prematurely. Not to worry. All diesel providers add lubricants to their fuel.

**Keep an eye on filters and seals.** In the past, changes in fuel chemistry (like adding ethanol) have had unexpected results on plastic parts. Keep an eye on filters and seals to make sure they retain their integrity, especially on older vehicles.

**Pay attention to your ATD.** The new chassis

have an after-treatment device that contains a diesel particulate filter (DPF) to trap and burn soot. Ordinarily, highway driving generates enough heat to keep the DPF clean. Operators may need to manually clean the filters of Guzzlers and Vactors that spend most of their time working. The system gives them several hours' notice when it needs cleaning. If operators do not plan a long ride to the shop, they can drive to a suitable on-site location and clean the DPF in 30 minutes.

For more information about the new regulations, visit [www.epa.gov/otaq/highway-diesel/regs/2007-heavy-duty-highway.htm](http://www.epa.gov/otaq/highway-diesel/regs/2007-heavy-duty-highway.htm).

## Why High Pressure is Not Enough – continued

may work for soft deposits, but you can do better.

Unlike the heat exchanger's small-diameter tubes, you can use a larger hose. Substituting 3/4-inch-diameter hose for 1/2-inch hose reduces the pressure drop to 1,600 psi. This gives you 8,400 psi at 45 gpm, a far more efficient combination.

Yes, boosting the pressure is important. But in this and most other cases, it takes the right combination of flow as well as pressure to work productively.

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