THE US HOUSING BUST:
IMPLICATIONS FOR CANADA

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Laval, January 29, 2008

Background to the Crisis

A Fool's Paradise

- Between 1996 and 2006, the price of single family homes in the U.S.A. rose by 195% - nearly tripling in value, as measured by the S&P/Case Shiller Index.
- After adjusting for inflation, home prices rose 127%, more than doubling over a period of ten years.
- The boom in housing prices has been a global phenomenon, in some countries rising a little more, in others a little less.
- Canada has been no exception, they have risen too, but with two differences: a) they started 1-2 years later than the USA and b) have not risen to the same degree as the USA, at least not yet.

The S&P/Case-Shiller Home Price Index

You need to compare "apples with apples" to make accurate and meaningful comparisons

- The conventional way of measuring prices by urban real estate boards is wholly inadequate. It does not take into account changes in the structure of dwellings such as quality, size and investment in home renovations, it does not take into account changes in the composition of houses sold over time and does not take into account special factors like foreclosures, non-arms length transactions, among others.

- The S&P/Case-Shiller Home Price Indices -constructed in the 1980s by Yale Professor Robert J. Shiller and Karl E. Case control all other factors and only measure price change. They are now widely considered to be the most accurate way to measure valuation changes in individual markets over time

Navigating Without an Accurate Compass

Bank of Canada Governor has spoken out on need of more accurate measures of price change in the housing market

- The methodology measures price movements by collecting sale price data pertaining to individual single-family homes within each geographic region. When a specific home is resold, the new sale price is matched to the home's first price creating a "sale pair". The indices capture the change in the price of homes that have not undergone significant changes in quality, or have not been distorted by special situations like foreclosure, non-arms length transactions or neglect.
- The methodology is similar to that used in the Consumer Price Index (CPI) and is therefore more accurate.
- Unfortunately no similar measure has been created for Canada or most other nations

Why is Residential Housing Important to the Economy

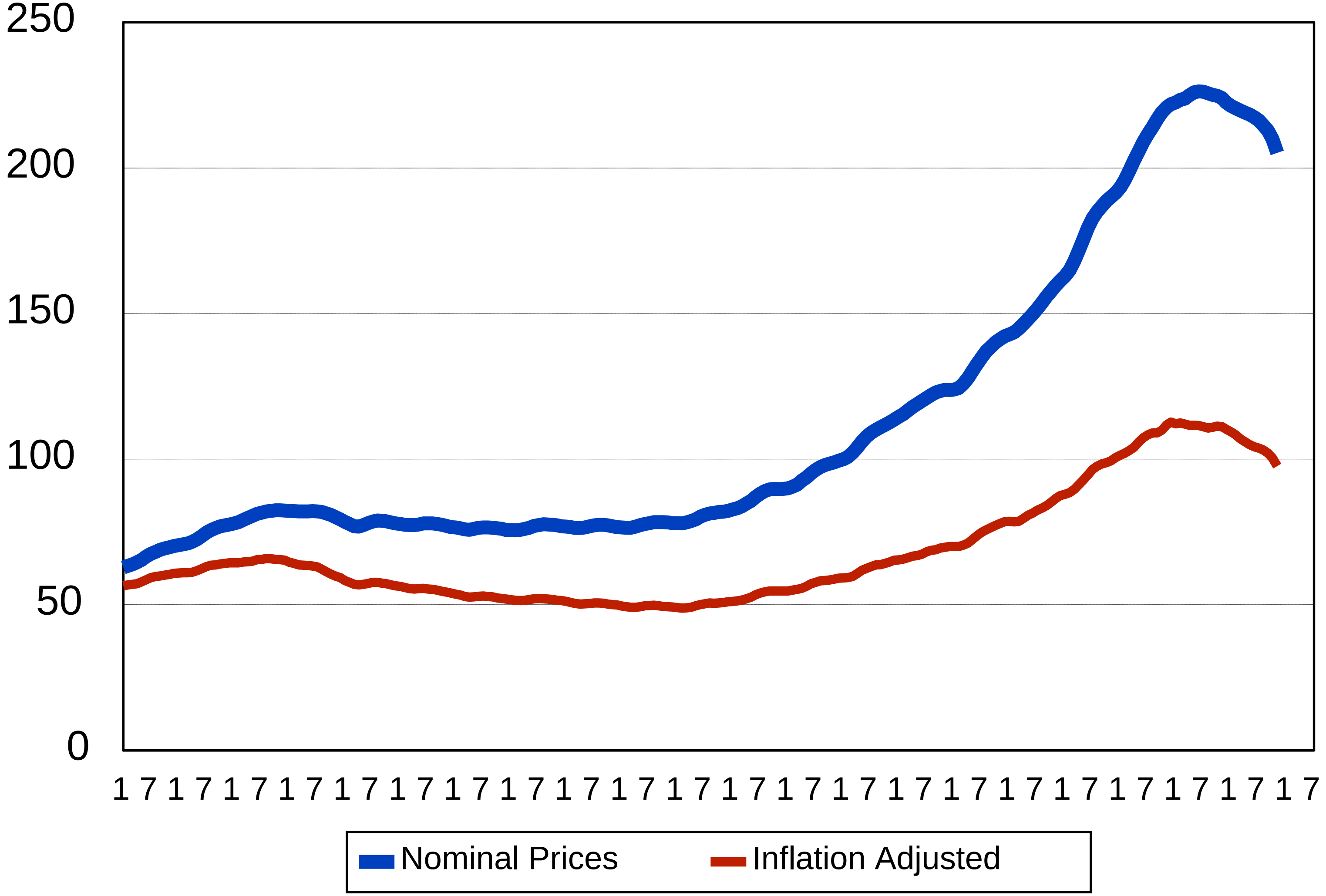
Two thirds of the population are exposed

- Residential real estate is one of the most important asset classes in a country s economy.
- In the USA residential real estate is valued at US$ 22.4 trillion, compared to US$ 19.3 trillion for equities and US$ 25.9 trillion for fixed income assets.
- The annual GDP of the US economy is valued at US$ 13.5 trillion.
- Since two thirds of households are home owners, changes in real estate values have a greater impact on the economy than changes in any of the other markets.

S&P/Case Shiller Home Price Index,

1987 - November, 2007

Between 1989 and 1996 prices fell 7.2% in nominal and 25.8% in real terms
Between 1996 and 2006 they rose 195.4% in nominal and 126.8% in real terms
Since 2006 they have fallen 9.4% in nominal and 12.6% in real terms



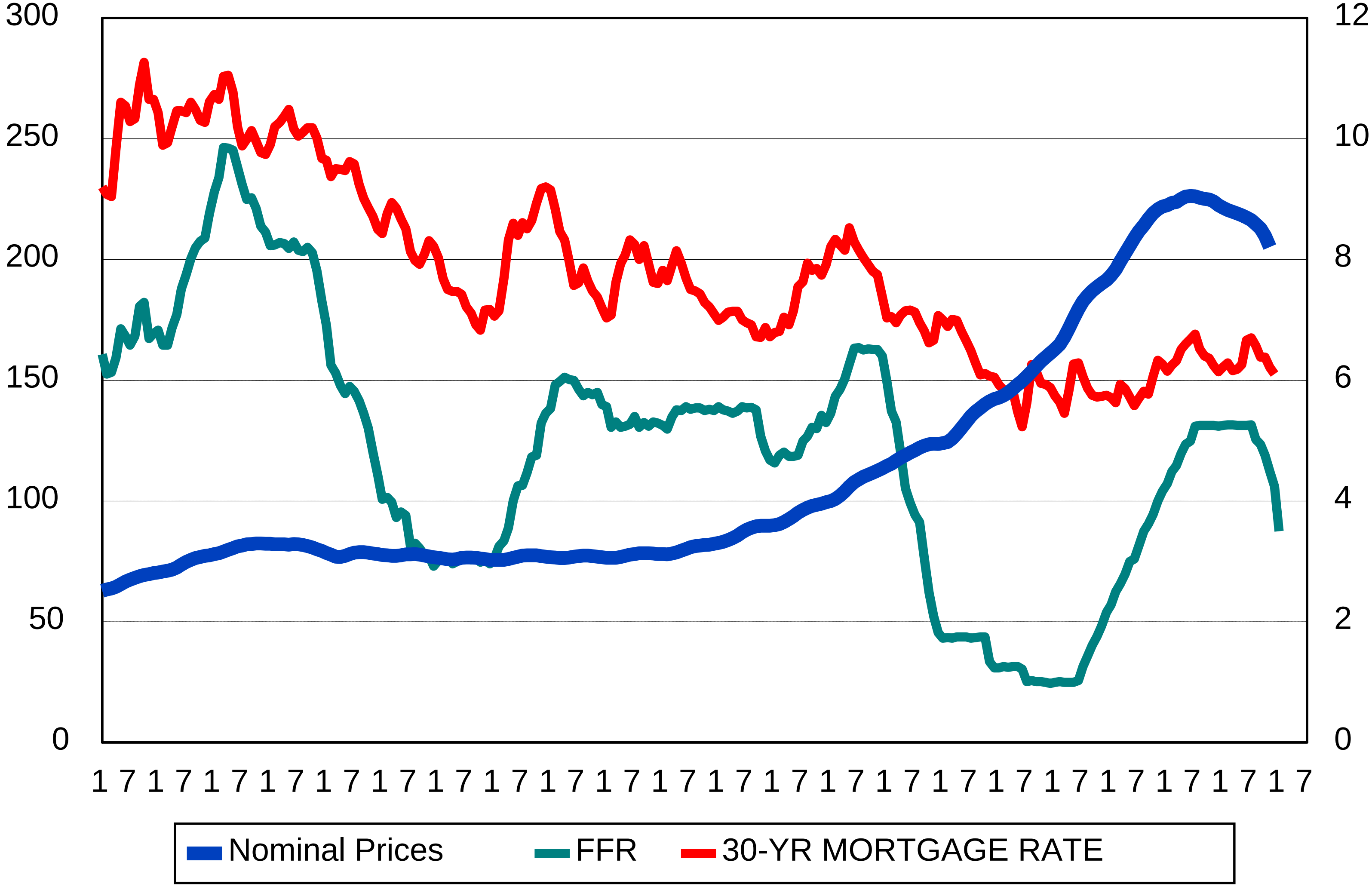
Why Did Home Prices Rise So Much?

Excess global liquidity generated by the U.S. Federal Reserve

- House prices have risen because interest rates have come down to generational lows
- Short term interest rates measured by the U.S. policy rate, the federal funds rate have fallen from 9.85% in 1989 to 1.0% in 2004
- Long term interest rates as measured by the 30-Year conventional mortgage rate have fallen from 11.05% in 1989 to 5.45% in 2004
- When short term interest rates started rising again from 1.0% to 5.25%, long term interest rates failed to follow, rising only to 6.25%
- When interest rates are adjusted for inflation, the USA has experienced **negative** real interest rates in 2003 to 2004!

Falling Interest Rates Have Propelled the Housing Market Upward

Overshooting is normal in markets



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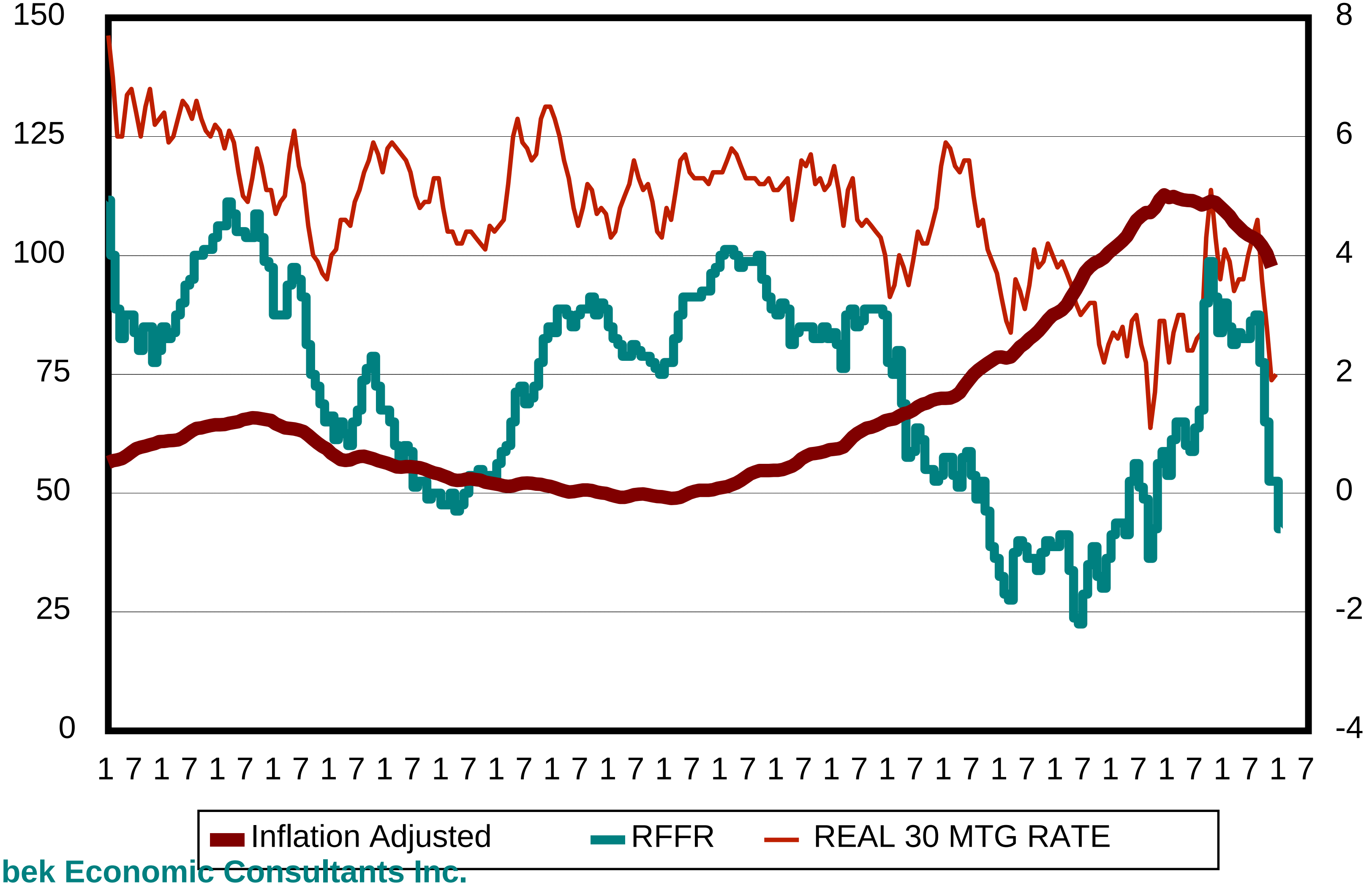
Real Short-term Interest Rates Turned Negative for a Prolonged Period

When interest rates are below inflation, the Bank pays you to borrow money!



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The Economics and Psychology of Asset Bubbles

Self-fulfilling expectations create the appearance of reality

- The natural laws of economics predict that when the cost of carrying a mortgage decreases, the demand for housing increases and this is why housing prices started to rise
- But the psychology of home buyers is a different matter
- As prices kept on rising, they created the expectation that they will continue to rise, since there is a commonly accepted -**but erroneous**- belief amongst the general population that house prices never fall, these expectations fueled a buying frenzy that created a housing bubble.

What is an Asset Bubble?

When one ignores the fundamentals, or mistakes fiction for reality, one loses

- When people buy or invest on the assumption, belief or expectation that the price will rise and ignore the investment fundamentals (laws of economics) a bubble is created.
- Since those before you made money in real estate, you think that you can make money too, as you buy real estate, you drive the price higher which rewards your decision, as other people see you profit, they follow you blindly which pushes the price even higher until the price has been driven so high that it has no where to go but down. When it starts falling, then people are shocked and panic follows.
- This is when the bubble bursts!

Housing Fundamentals: Some Facts to Keep in Mind

The general public suffers from “money illusion”

- In the long run housing prices -adjusted for inflation- are constant. They may exhibit upward or downward trends for many years, but in the end they return where they were before
- Yes, it is true that house prices are an excellent hedge against inflation. Inflation, which is a loss in the value of money, always makes the nominal value of your house rise, but don't confuse the nominal with the real price. Even if the value of your house has doubled, so has the cost of living.
- Housing is like every other commodity, when demand rises, so does the supply through new construction. The price may rise temporarily when demand increases, but it also falls when supply increases.

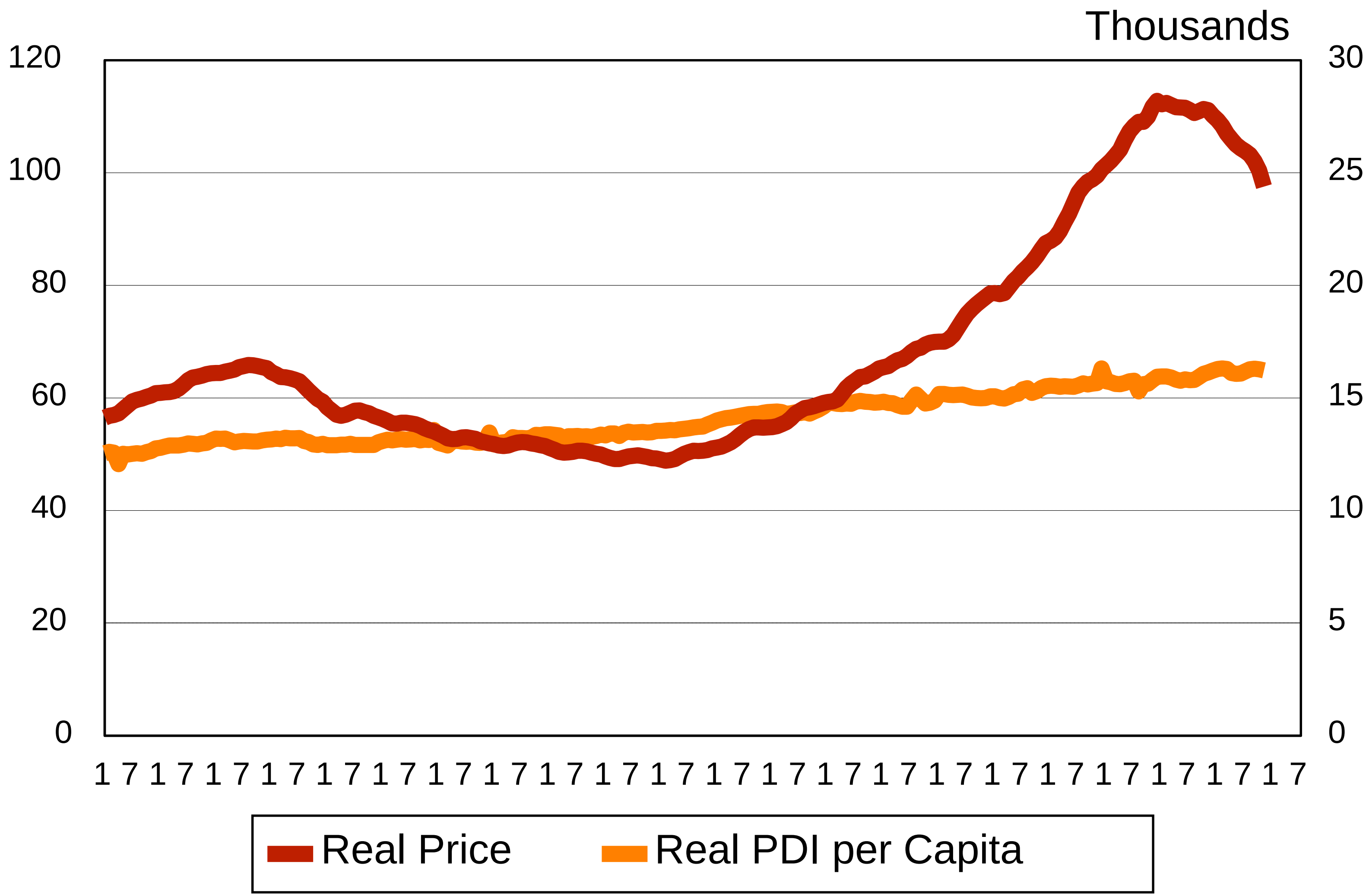
Housing Fundamentals: Some Facts to Keep in Mind

Don't pay more than three times your gross income to own a home

- The main driver in the value of housing is income, the product of being employed and living in a healthy economy
- A traditional yardstick is that you should never pay for your home more than three times your gross income.
- In the long run, house prices follow the rise in incomes and living standards
- In the short run, variations in interest rates which affect the cost of carrying the mortgage do affect the value of homes. When interest rates fall housing values rise and when interest rates rise, they fall. Buy when rates are high, sell when rates are low
- Geographic and locational factors also affect the value of homes. If you buy in a neighborhood which is becoming a hot area to live in, prices rise, likewise if you are close to transportation and the city core and other amenities.

The Real Price of Homes and Growth in U.S. Real Personal Disposable Income

Never stray too far away from fundamentals like income



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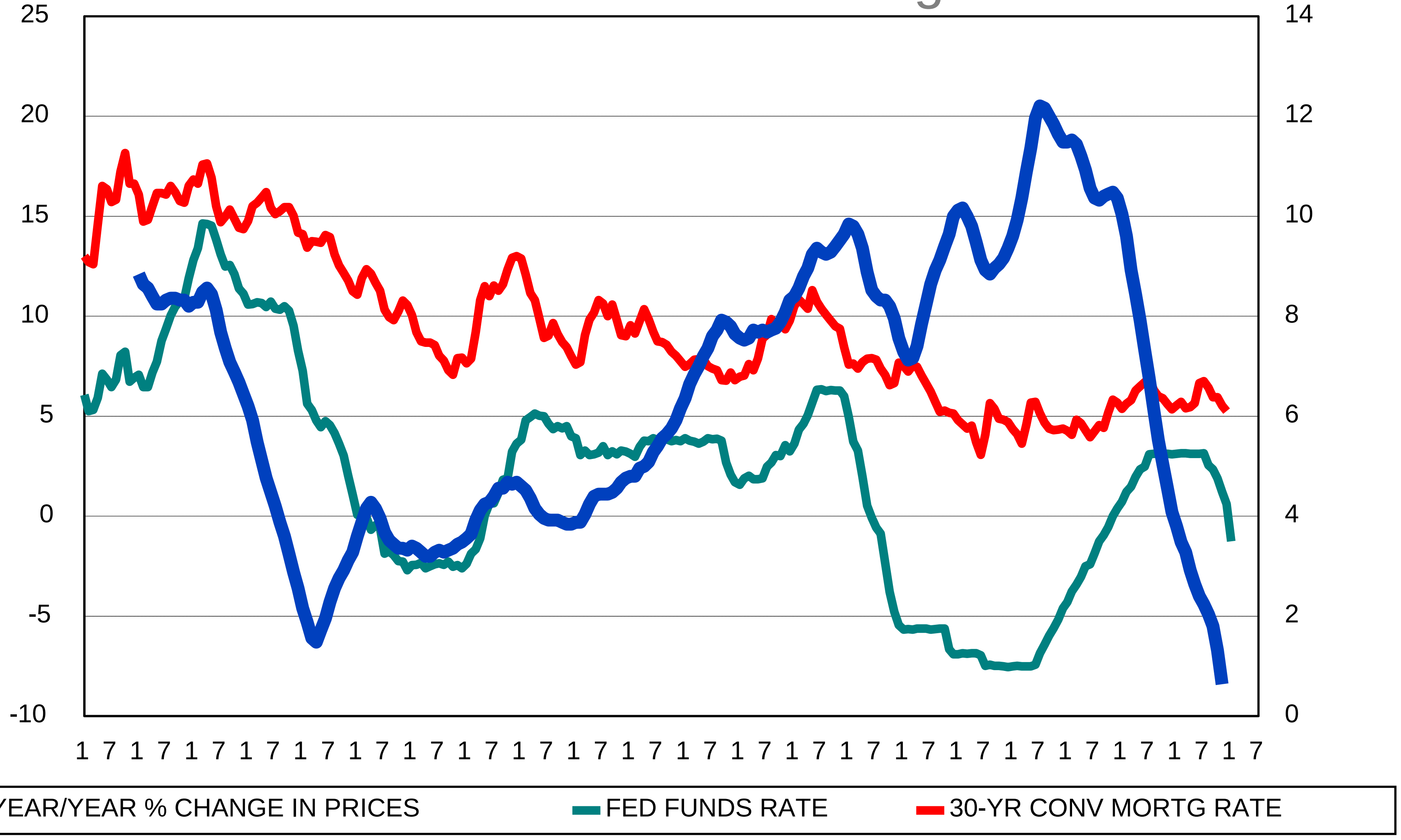
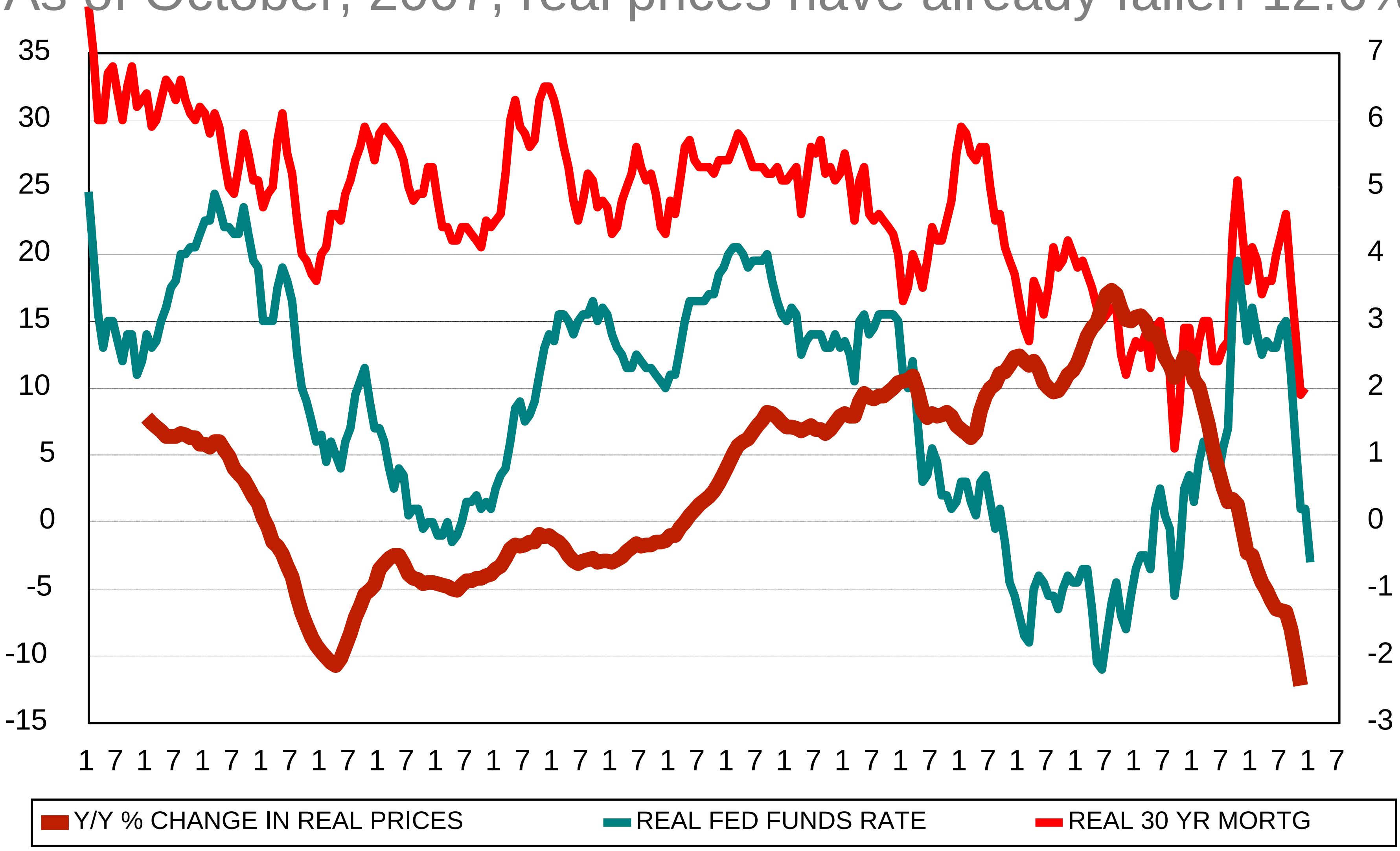
Year-over-Year Change in Home Prices in the U.S.A.

Since November, 2006, real prices have been falling and the rate is still accelerating



Y/Y Change in Prices of Homes and Interest Rates After Adjusting for Inflation

As of October, 2007, real prices have already fallen 12.6%



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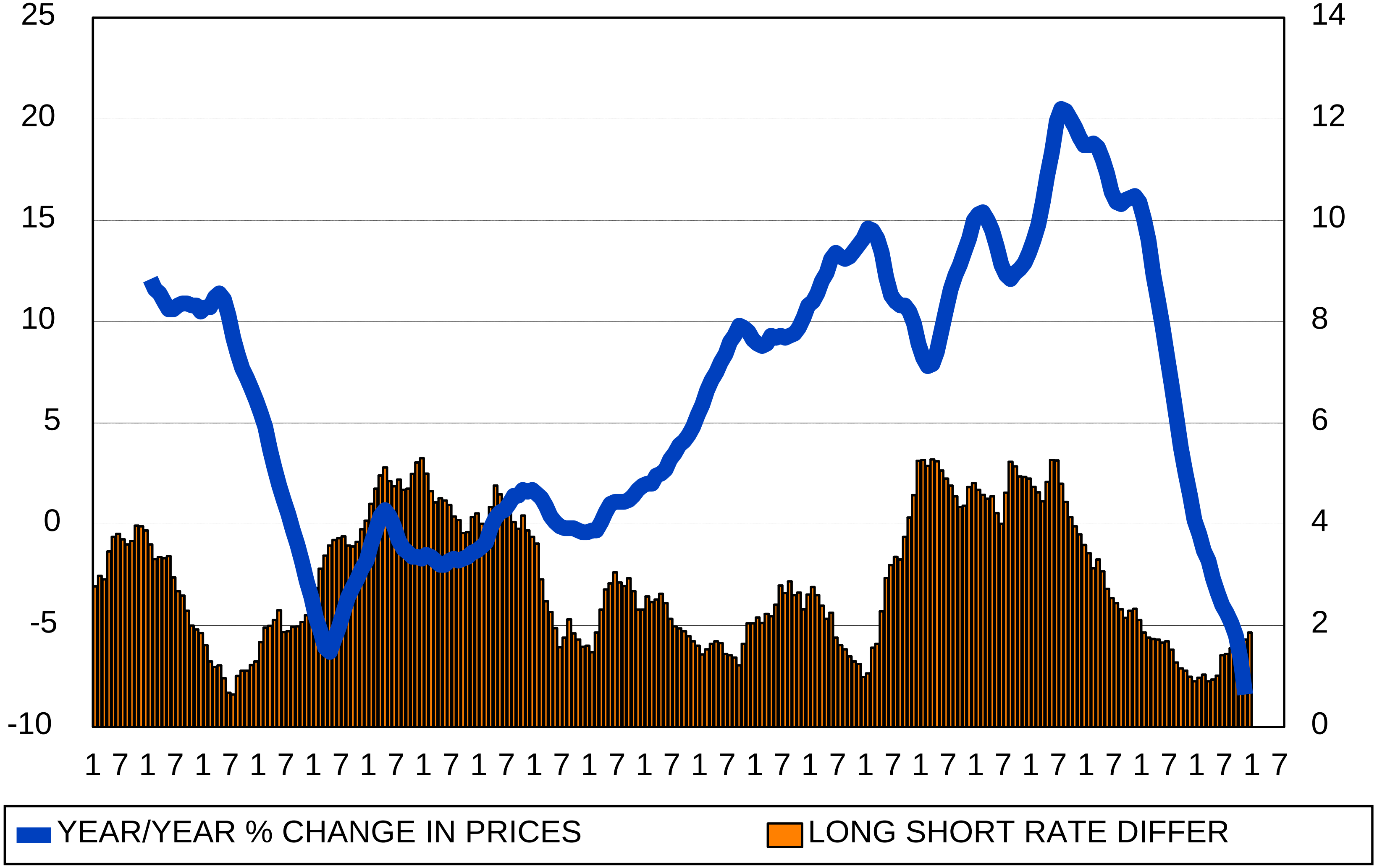
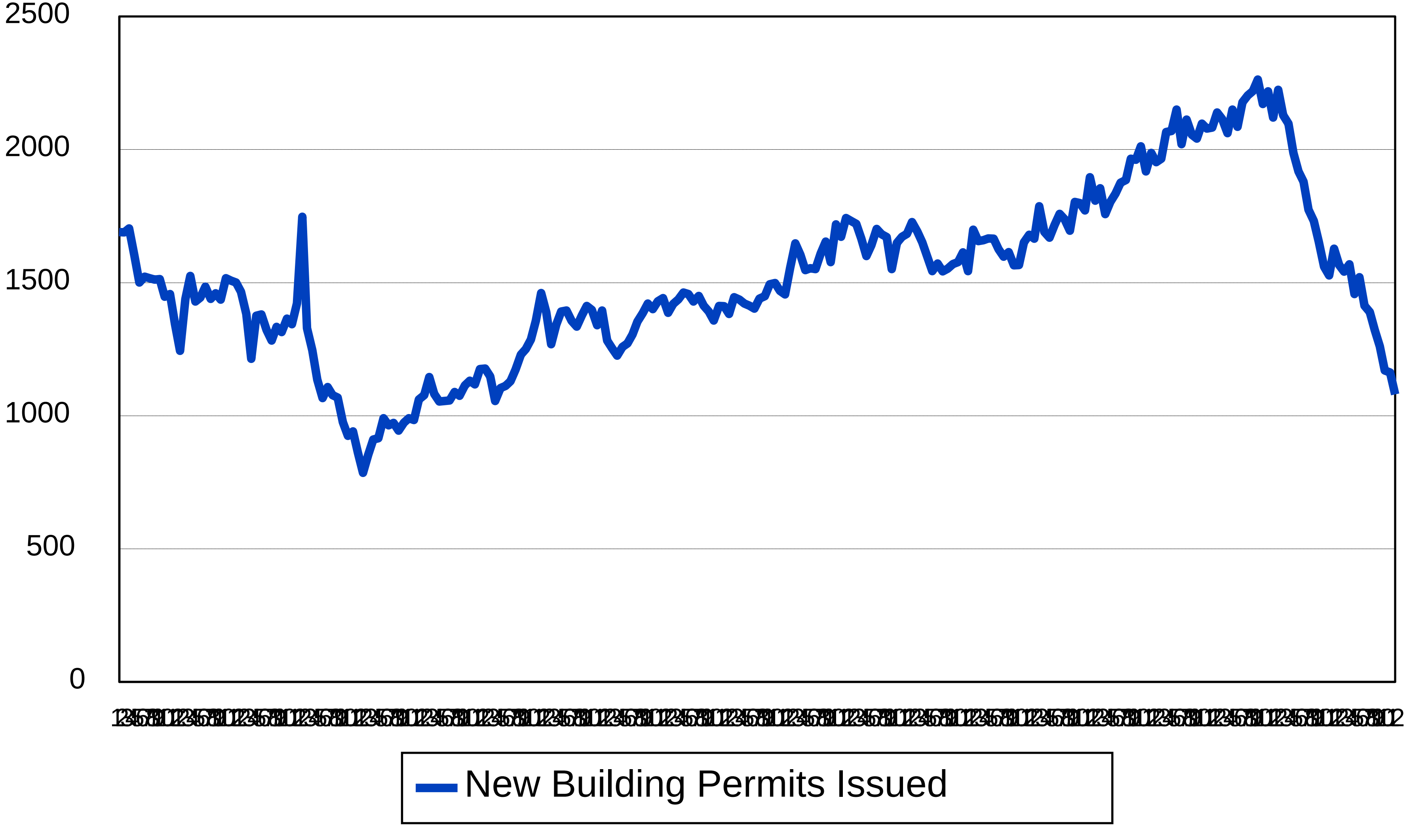
30-Year Mortgage Rates Minus Fed Funds Rate

As the differential between long and short interest rates narrows, liquidity tightens and house prices fall



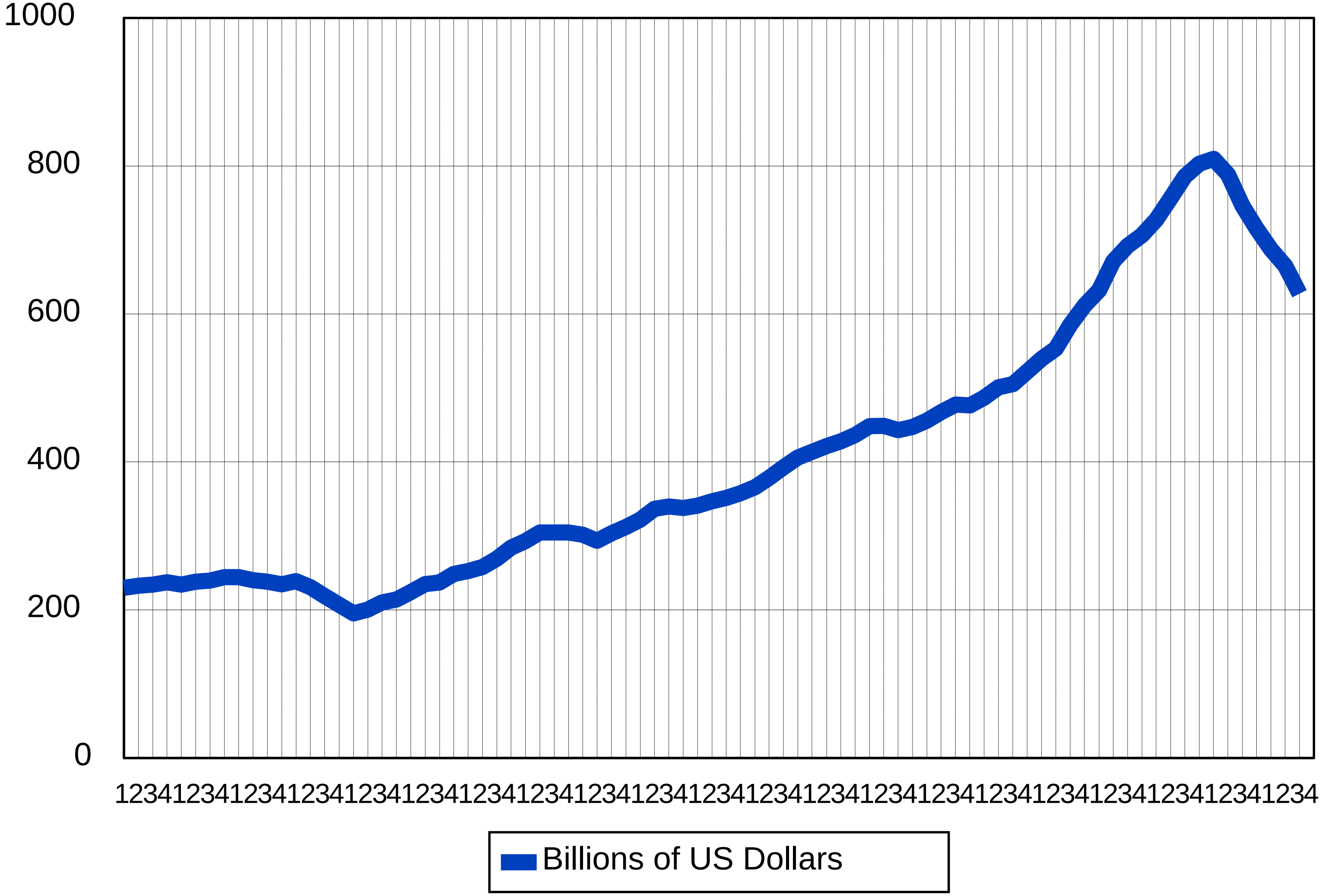
New Private Housing Units Authorized by Building Permit

Since January, 2006 building permits issued have fallen more than 50%



Private Residential Fixed Investment, USA, Q1 1987 - Q3 2007

The amount spent or residential construction has fallen 22.5% since Q1, 2006



New Home Sales Plunged by Record 26.4% in 2007

The latest news released yesterday morning is bad

- Sales of newly built homes plunged by 26.4% in 2007 compared to 2006, making it the biggest drop on record
- US Commerce Dept. reported yesterday that new home sales fell to 774,000 units, down from 1,051,000 in 2006 and lowest level since 1996
- In December 2006, sales fell to an SAAR of 604,000 units, down 40.7% from December, 2006 - a 13 year low!
- Median prices fell 10.8% from November, 2007 while the inventory of unsold new homes stood at a SAAR of 495,000 units which represents a supply of 9.6 months at the current sales rate
- Meantime existing home sales have declined 22% in Dec. 2007, compared to Dec. 2006, a broad decline across all regions

How Severe Will the Housing Bust Prove?

Differentiating between a correction, a bust and a meltdown

- When housing prices adjust to economic fundamentals like changes in interest rates, and economic activity (expansions and recessions) it is called a correction and the price drop is modest and doesn't last very long
- When irrational expectations have created a price bubble and it bursts, it is called a bust and the price drop is severe -dropping by 33% to 50%- and prices keep falling for 4 - 5 years
- When a housing bust occurs and the economy is fundamentally strong, a period of below average growth follows and the worst of the damage is contained. Other compensating mechanisms kick in and the degree of adjustment is lessened

How Severe Will the Housing Bust Prove?

Very!

- This particular bust is unlike other episodes in history and has the potential to prove one of a kind - a meltdown- with very serious consequences for the U.S. and world economy - WHY?
- First, because it has been accompanied by a credit/financial bust in credit markets which have caused a run-up in rates and a tightening in bank lending standards and availability of credit
- Second, because the collapse in credit markets which started on August 16, 2007 involves a new type of financial instrument - asset-backed securities (ABS) - or collateralized debt obligations (CDOs) which converted housing and consumer loans to securities which were then pooled and sold to investors world wide as low risk investment grade securities

How Severe Will the Housing Bust Prove?

Recklessness and greed bordering on fraud

- Third, because a disproportionate amount of housing loans backing up these securities were subprime loans to not credit worthy borrowers. Many of them involved new type of mortgage loans which did not require a downpayment by the borrower or were adjustable rate mortgages (ARMs) which means that the rate has yet to be set and therefore the underlying value of the asset cannot be established. Since 37% of home buyers in 2006 reported buying a home as an investment - to flip and make a quick profit - proof positive that mass speculation was involved, and without a downpayment these home owners are not committed to paying it off but can walk out of it with little loss of money, in effect it is the holders of these ABS/CDO securities that are subjected to the full loss in value!

How Severe Will the Housing Bust Prove?

A toxic brew of factors can create an explosion

- Fourth, because the continual drop in prices has not set a floor on how much loss will ultimately be involved and the amount of time needed before all this can be addressed will take between one to two years.
- Fifth, because the majority of these securities were sold to investors outside the United States and therefore has internationalized the US housing and credit bust
- Sixth, because it threatens to destabilize the entire US economy and push it into recession -some analysts believe that the recession has already started- resulting in a global economic slowdown and
- Seventh, because it undermines confidence in the US financial system and US leadership in the world economy.

A Confluence of Mutually Beneficial Interests

They all collected fees and eventually, the public will pay

- Greedy mortgage loan brokers conspired with greedy real estate brokers and building contractors to persuade ignorant buyers who could not qualify for bank loans to pursue the American dream with no downpayment. They all collected fees.
- Greedy banks underwrote the mortgage loans and then sold them to slick and greedy major Wall Street investment bankers who then using financial engineers with mathematics Ph.D.s transformed them into asset backed securities (ABS) and structured investment vehicles (SIVs) which they then presented to credit rating agencies to approve as investment grade securities that were then handed down to the trading desks of investment advisors and glorified salespeople who sold them to yield starved investors around the world with deep pockets of surplus funds to lose. They all collected fees.

Greed, Excess, Recklessness and Political Expediency

The post-mortem assessment of a tragic comedy

- In the meantime bank regulators and central bankers were asleep at the switch, content on how successful they had been in containing inflation and complacent on how sophisticated and efficient American financial markets were. They failed to question or curb these unsound practices.
- In Washington, D.C. political leaders from Congress to the Whitehouse all the way up to the President were overly concentrating on what was happening in the streets of Baghdad and not paying attention on what was going on in the residential neighborhoods of Main Street America. They were eager to detract attention from the heat of the conflict in Iraq, preoccupied with nuclear fantoms in Iran and happy to report that the American economy was perfectly sound and creating wealth.

The Consequences of a Bursting Bubble

The mess is huge and going to get worse before it gets better

- Home prices have been falling since June, 2006 and are now on a free fall, cutting into home equity values and increasing the financial insecurity of the public
- Mortgage foreclosures have surged with the worse to come later in 2008
- The market for asset backed securities froze and crashed on August 16, 2007 and banks are no longer willing to lend to each other against these securities
- There was a sell-off in the U.S. dollar which on November 7, 2007 depreciated to the lowest point since 1971 when measured against a basket of major currencies and to levels not seen since pre-Confederation when compared to the Canadian dollar

The Consequences of a Bursting Bubble

With housing and equity prices falling, gold is rising

- The largest and most venerable Wall Street investment banks like Citigroup, Merrill Lynch, Bear Stearns, have reported over $150 billion in write-offs with more to come as the year unfolds
- US equity markets sold-off violently in January 2008 and have precipitated a global sell off around the world erasing nearly $5 trillion in global stock market capitalization
- The unemployment rate has jumped to 5.0% in December, 2007 from 4.5% in June, 2007, the steepest run-up since the 1991 recession
- The price of gold, a barometer of confidence in the US dollar and the international monetary system, has risen to US $950, surpassing the previous high of $850 reached in August, 1980

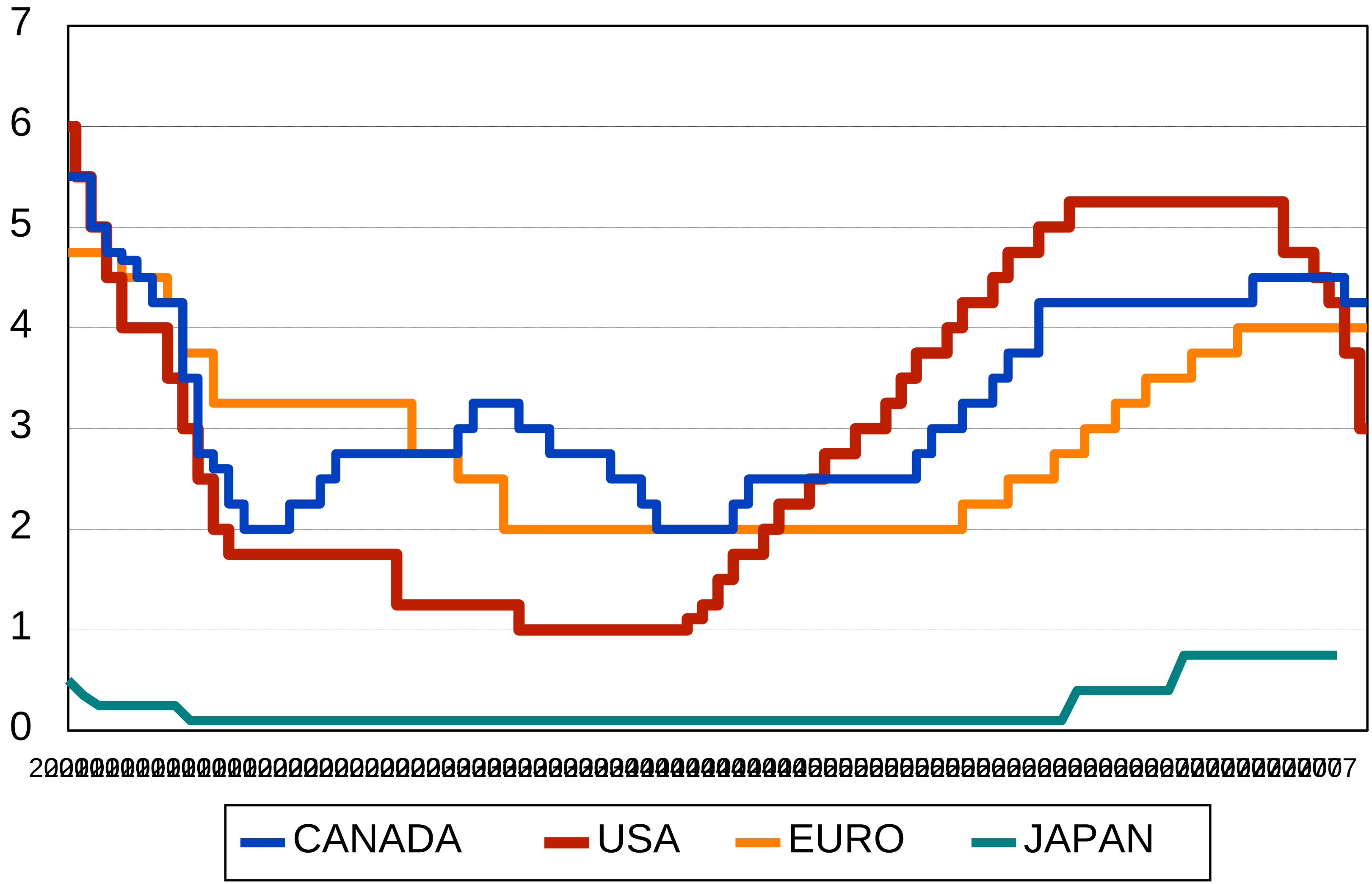
What is Being Done to Contain the Bust?

911 - Central banks were called to the rescue - SOS

- Central banks from the ECB, to the Federal Reserve put their lender of last resort functions on display in a most dramatic fashion pumping as much as $0.5 trillion in one shot by the ECB in December to assure a quite Christmas in the markets
- The US Fed cut interest rates in September, October and December by 100 basis points, and in a dramatic unscheduled move cut the fed funds rate again by another unprecedented 75 basis points on January 22, lowering it from 5.25% in September to 3.5% now. The only other time in US history the Fed slashed rates this sharply in one shot was in the aftermath of the October, 1987 stock market crash, when equity prices fell 22%, more than on October 1929
- The Fed is expected to cut by another 50 basis points when it meets on January 30th, bringing the Fed funds rate to 3.0%

Central Bank Key Policy Rates, 2001-2008

So far, it is only the USA that has had to slash rates aggressively



What is Being Done to Contain the Bust?

Help is on the way, but it won't get there on time

- Last week on January 24, the President announced a US $145 billion fiscal stimulus plan to inject spending power through temporary tax cuts to American families to stave off a recession in the USA and ease the pain
- US Government is working on a mortgage relief effort to modify mortgage terms and conditions on non-conventional mortgages to make it harder for holders to walk away from them and reduce foreclosures by banks
- New York City investment banks have turned to foreign sovereign wealth funds from the Middle East to South East Asia for capital injections to boost their damaged capital base

Public Losers ... Private Gainers

Lack of transparency and blatant disregard for moral hazards

- In the meantime not one word has been heard from private equity pools of capital like Blackstone and KKR. While they were making constant headlines in 2005 and 2006 borrowing short and investing long acquiring publicly-listed companies, lately they have been noticeable with their silence
- Rather, private equity firms have been working privately and feverishly the backdoor corridors of power trying to persuade government and monetary authorities to slash interest rates to bail them out!
- They have succeeded. The Fed is slashing rates mostly to bail out Wall Street, not Main Street.
- Those who were reckless and irresponsible are now being rewarded while the general public will pay in the future with higher inflation and higher interest rates - the moral hazard.

What are the Implications for the Canadian Housing Market?

Canadian lending practices have been more sound, contributing to a healthier environment and more stable housing market

- A number of factors differentiate the Canadian market:
- 1) Housing prices did not climb as high as US prices, so they don't need to fall as much
- 2) Interest rates did not drop as low in 2003-04 to fuel the boom and did not rise as much in 2006 to precipitate the bust, but have remained relatively low and stable contributing to a more stable market
- 3) The housing upswing started 1-2 years later in Canada and so the bust has not started yet
- 4) The percentage of subprime mortgage lending in Canada appears to be significantly lower than the US, no zero-downpayment mortgages have been issued here and there are fewer ARM practices

What are the Implications for the Canadian Market ?

And Canada's economic fundamentals remain superior to those in the USA

- 5) Given the run-up in resource and especially energy prices, Canada's terms of trade have improved while those of the USA have deteriorated which provides indirect support for our market
- 6) Governments from the Federal to Provincial levels are enjoying budget surpluses and falling debt levels which reduces the pressure for property tax increases. At the same time Canadians have been benefiting from tax cuts and increased public spending on infrastructure projects which should also prop up housing affordability and the residential housing market in general
- 7) Canada has become a net capital exporter, which means that we can afford to hold interest rates lower

What are the Implications for the Canadian Market?

But our housing market remains overvalued and subject to a modest correction

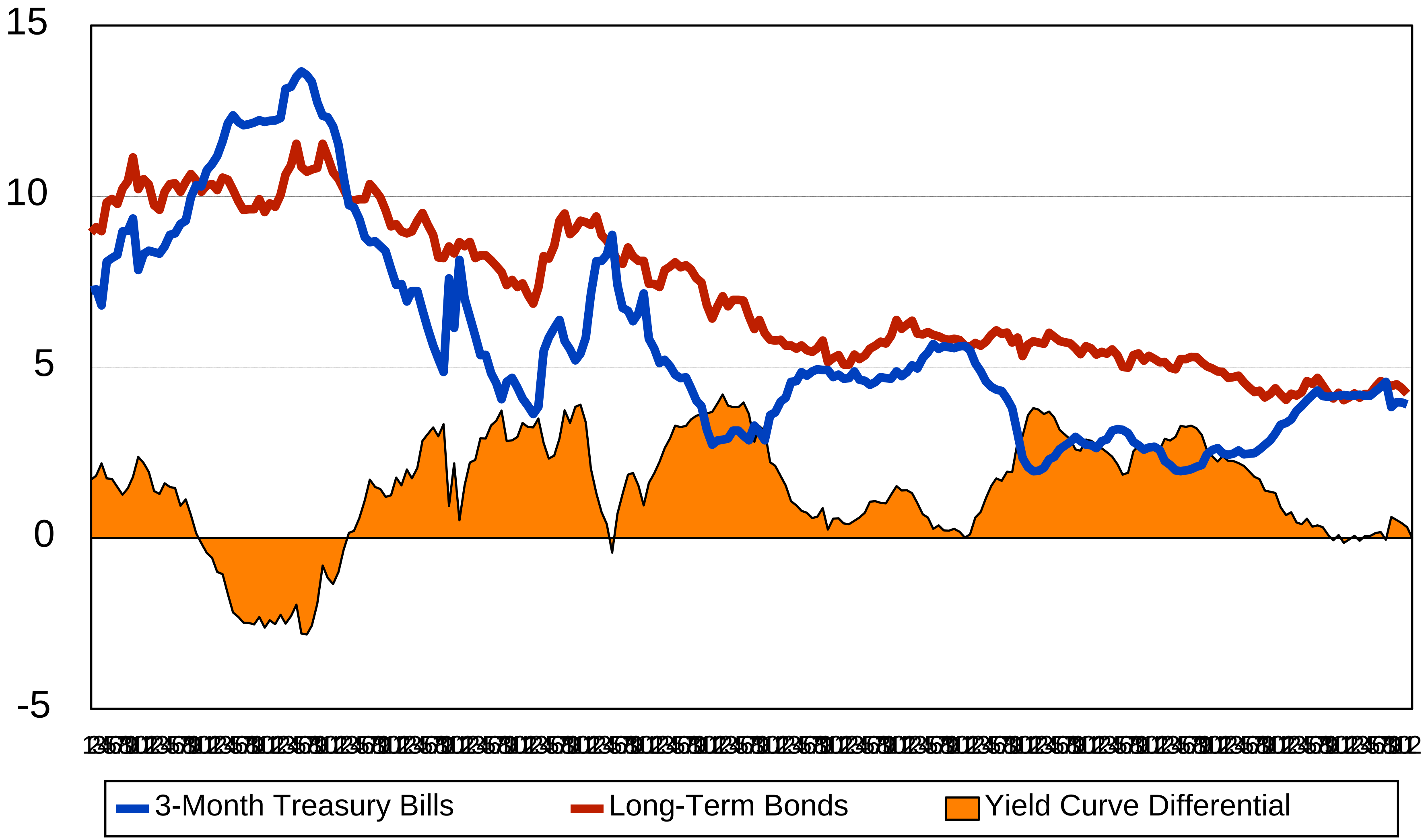
- Notwithstanding all the positive factors in favour of the Canadian market, my view is that the Canadian housing market has overly appreciated the past three years and is vulnerable to a significant correction of the order of 15% - 25% in real terms. This is not a bust, but a significant correction.
- I anticipate this correction to start later in 2008 and accelerate into 2009. Currently house prices are still rising, but the rate of increase is clearly slowing down, implying that momentum is running out of steam.
- The segment of the market most vulnerable to a correction is the market for condominiums and the markets of Central Canada, i.e. Ontario and Quebec where population growth is lowest and which are most exposed to the USA

What are the Reasons for a Correction in Canada?

Monetary conditions in Canada have tightened considerably!

- Markets follow their own internal dynamics: they rise and fall and we already have had an upswing lasting ten years from 1998 until now. Now conditions are ripe for a break
- Monetary conditions have tightened considerably since 2003-2004. Not only are interest rates higher, but most of all, our currency has risen over 60% since 2003 against the USD. By slowing our exports and increasing our imports it siphons spending power out of Canada and is equivalent to a 3-4 percentage point hike in interest rates
- While the monetary tightening affects all parts of Canada, Western Canada at least offsets this by charging more for its energy exports, while Central Canada, which is a net energy importer -like the USA- has nothing to offset it with, which is why I expect Quebec and especially Ontario to correct more

Monetary Conditions in Canada Have Tightened Considerably in 2006-07



What are the reasons for a Correction in Canada?

Our credit markets have been infected by the US subprime flue and homeowner psychology will not remain immune

- The recent crash in the market for asset backed securities has increased money market spreads even in Canada and has made Canadian financial institutions more cautious in granting credit.
- Let's not forget that we have our own asset backed securities problem which contains US subprime loans amounting to at least $35 billion, the Caisse de depôt et placements du Quebec (CDPQ) announced an exposure of $13.5 billion to these securities
- The negative psychology regarding the housing market will inevitably spill over into Canada as well, although it is hard to gauge to what degree it will do so, but it has always done so in the past

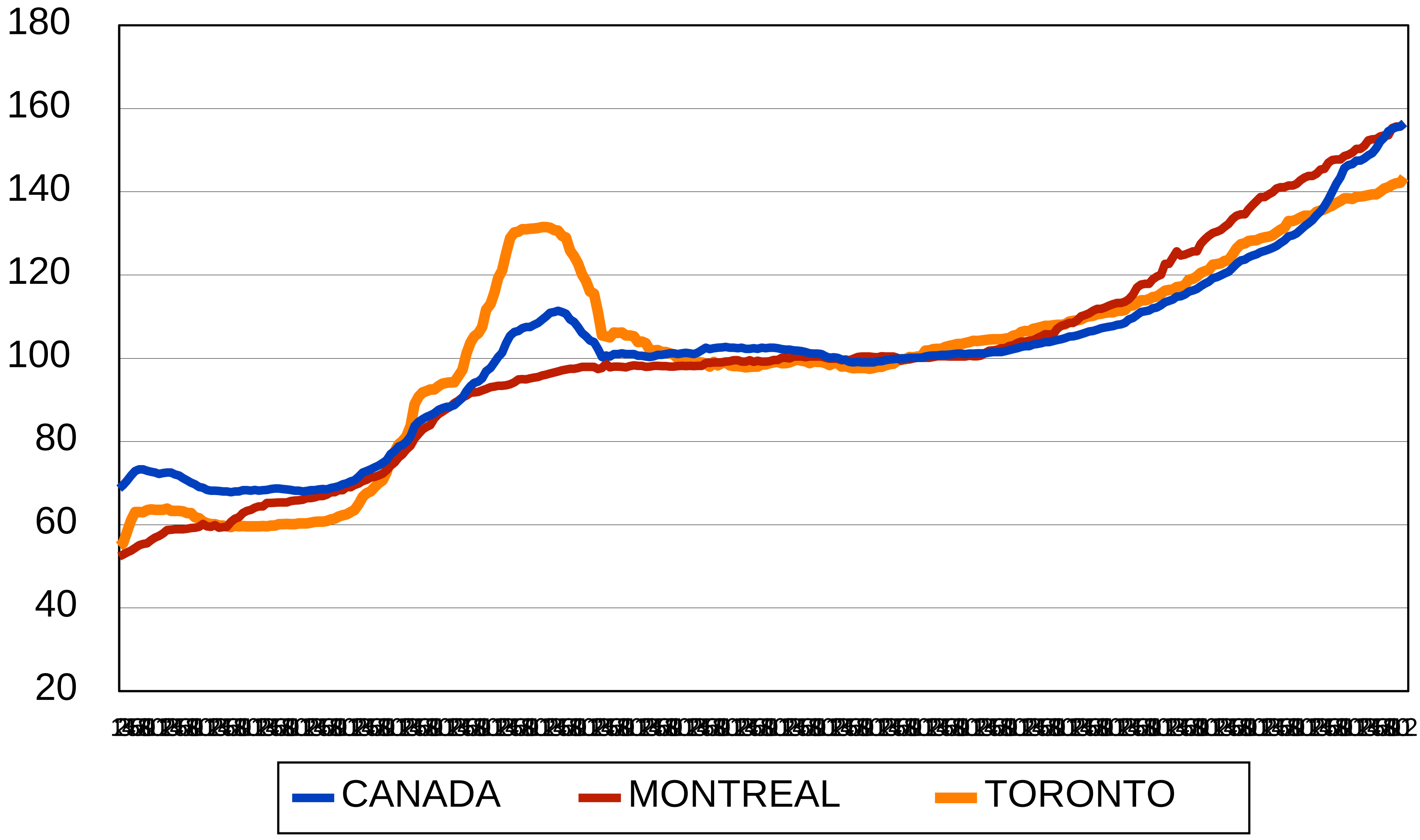
Even Bigger Risks are Looming in the Horizon!!!

The odds that things might get even worse are high!

- The biggest risks to the above analysis have not been factored in this forecast. They are 1) that a US recession and financial market turmoil will encompass the rest of the world economy resulting in a global slowdown and/or 2) a weak US economy coupled with low interest rates will undermine the value of the US dollar and push the Canadian loonie to US$1.10 and go beyond that to $1.20.
- If any of the two scenarios materialize, it will prove very harmful to Canada, undermining our exports, and tipping our economy into a recession as well. And when it does, Central Canada will be pounded. Canada has not had a recession in over 15 years, do you believe that the current expansion can go on forever?

NEW HOUSING PRICE INDEX, 1981-2007

CANADA, MONTREAL & TORONTO



The End

Thank you for listening !

It is better to be forewarned than surprised

An ounce of prevention is worth a pound of cure!

The free world depends on a strong US economy that is managed with **sound** policies which leave no room for others to question it’s leadership in the world