Notes of a Hypothesis

What Caused the Bubble?

(Mainly in the Real Estate Market)

"Diffusion of Inflationary Expectations"

(December 21, 2010)

(Written by Takashi Yamaguchi, a real estate appraiser in Japan)

< Diffusion of the inflationary expectation >

From the perspective of supply and demand, it is a diffusion of the expectation of a future shortage.
From the perspective of gain on resale, it is a diffusion of the speculative fever.
Above two interact in a market where actual demand and speculations coexist.
Including these two, it is a diffusion of the inflationary expectation.
In a bubble, inflationary expectations diffuse.

……

We don't have any statistics for the diffusions of inflationary expectations, in Japan. It spreads by means of stories (rumor, word-of-mouth, information, etc.). 'Animal Spirit' (written by Akerlof and Shiller) assimilate it to a contamination of virus.

If we exclude the influence of the mass media and advertisements, and include individual characters into the infection rate and sideration rate, SEIR model may be applicable. It is a mathematical model in epidemiology. It is also used as a model for a 'word-of-mouth diffusion'. (Note: Conditions (excess-money or age-of-confidence) may be able to be set in the formula like a season.)

If the number of people who carry the inflationary expectation increase as below,

* The first one tells the second one with flush, "Great! Great!"
  One month later, the second one catches the inflationary expectation.
* The second one tells the third one with flush, "Great! Great!"
  One month later, the third one catches the inflationary expectation.
* Like above;
  if each one contaminates the fever to a new one in a month,
  if all members continue to hold the fever to the end of the boom,
  if the susceptible population is 120,000,000, and
  if this sequence (a chain reaction) continues,

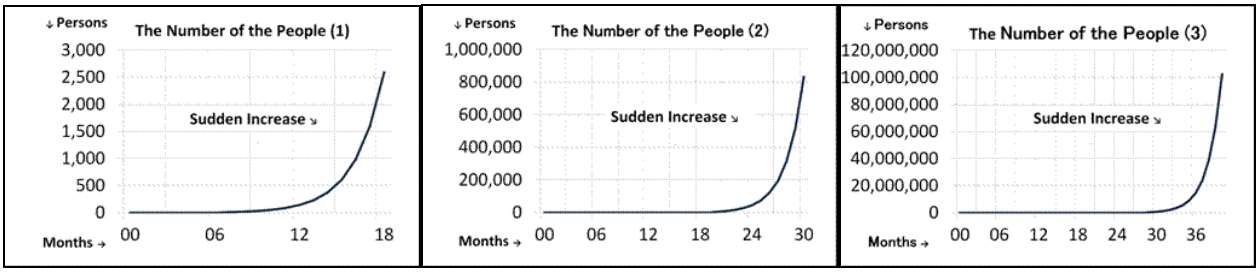
the number of people who carry inflationary expectations becomes:

1.5 years later: 3,000

2.5 years later: 1,000,000

3.5 years later: 120,000,000

(Note: This is an assumption. In fact, we need actual statistics.)



The most notable character of this sequence is that;

It is a sudden increase in every period, so it makes us feel it uncontrollable.

(Incidence rate)

Within the carriers, the percentage of people who start land speculations is quite small.

(Factors)

* Ability to acquire mortgages.
* Individual characters like the diffusion of innovations theory.
* Environments such as experience of real estate transactions or financial transactions.
* Other factors.

<As for the share, incidence rate was higher.>

A small fever in central Tokyo in 1983-85 swelled up to a confusion in which Ginza's land price was rumored to be tripled at the end of 1985. Banks started fierce lending due to the excess money which was caused in a sudden yen-hike from 1986. Sharp land price-hikes had become a serious social problem by mid 1987.

(Note): Land sharking, which was a symbol of Japan's bubble, is not a phenomenon that suddenly appeared in the bubble period (from 12/1986). It had been called the 'cornering of lands' in the first half of 1980s. It was an act to ask a realtor/builder to buy and assemble small lands to construct a large building. It became a monster through pressing office demands, banks' fierce lending, and the process above mentioned (a chain reaction).

(Note): As I write in the 'Mechanism of a New Type Emergence', the bubbly price levels would not have been created by the land sharking itself. I think it was created mainly by its metastasis to the 'land price'.

……

< One important reason why we don't notice a bubble in it >

1. As to the absolute situation, we tend to think that the current state is usual after adapting to a new environment.
2. As to the direction to move, we tend to think that the same direction will continue.
3. As to the relative situation, we tend to think that it is not strange because others are doing similarly. (One who came from another herd may feel it strange.)
4. Public thinking is formed in a herd's movement, and it flies. It is similar to the birds' flight, that is, BOIDS.
   * Separation: They steer to avoid crowding local flock mates.
   * Alignment: They steer toward the average heading of local flock mates.
   * Cohesion: They steer to move toward the center of local flock mates.

< Example of a similar case >

If drawing an analogy, it is like the 'Boiling frog story'. < Insensible >
Herd behaviors had been so important for lives that it might become an insensible zone. ??
(Ex.: Lives become prey, by far ratio, outside a herd. Ex.: As for a gazelle, its rate is 8 times higher.)
"Our new brain created this complex new environment." vs. "We have not yet got adaptive reactions genetically."

So, we need;

1. to be aware that we can not notice a bubble in it.
2. a thermometer.
3. to know the danger zone through statistics.

< Examples of measures >

Some volunteers patrol in a baseball/football stadium to give excited spectators a warning, "Don't throw it!" Spectators sometimes throw something when they get excited, and it stops the game.

Zabuton (cushion) of Japanese sumo is made of sponge not to injure others when spectators throw it. Spectators tend to throw it when an upset game occurs.

They know the occurrence through their experiences. They check the temperature by degree of the excitement. They know the danger zone through their experiences.

< Application of measures >

We need long term statistics of the inflationary expectation, besides statistics of excess money,

mortgage balance, ratio of investments per GDP, and fair values.

Strong herding behaviors come from emotions such as flush (confidence), fear, and mania. 'Unforeseeable future' and 'aspiration to extend the life' underlies them. Based on these premises, when inflationary expectations spread like virus, people start to buy properties one after another.

If we can create a scheme in which everyone become conscious of a bubble in it, the price wave would become smaller (while it would not be so easy to draw the scheme).

< Example of the scheme >

1. One can not register real estate transactions without presenting a questionnaire.
   + Duty of confidentiality.
2. To know the place of outbreak and infection routes of speculative price-hikes. (by districts)
3. To obtain the number of supply and demand which came from the present, the number of demand which came from the future, and the number of supply which came from the past. (by districts)
4. To produce long-term statistics of agreed price and corresponding mortgage. (by districts)
5. To obtain the cap-rates of properties for rent and operational assets.
6. To obtain a force of infection, an average latent period of the inflationary expectation, and a rate of the persons who go into actions.
7. To simulate it like a typhoon or a new type of influenza. < Transparency of the market! >

< Supplementary explanation of the reason >

We need to watch what is moving to know the right name of a disease, in addition to a diagnosis depending on symptoms. When there are four possible disease names, four doctors would say different names depending on symptoms. But, as soon as a virus is detected, all doctors will point out the right name.

As we look back on Japan's bubble, if we fail to notice it timely, a bubble would not be stopped by usual controls. On the other hand, without a conviction, strong controls can not be carried out. What is more, if everyone becomes assured of being in a bubble, the bubble could start to collapse from that day forward.

Virtually every mania is associated with a robust economic expansion, but only a few economic expansions are associated with a mania. Property price-hikes associated with a mania, in many cases, collapsed and brought economic crises. (See: Manias, Panics, and Crashes)

< My advice >

Influenza spreads in winter when virus proliferates.

Speculation spreads in an age of excess-money/confidence when inflationary expectation proliferates.

Booming + Soaring + Shortage would not be supplied soon = Don’t buy it!