Tulips from Amsterdam

After-dinner address by Trevor Sykes

As you will have gathered from the introduction, I've been a journalist for nearly 50 years. The last 34 of those have been spent covering finance and part of that time has been spent writing as my alter ego, Pierpont, a column which I created 31 years ago.

As Trevor Sykes, I cover all aspects of finance, but Pierpont is more of a scandal-mongerer and tends to focus on follies, fraud and collapses. Indeed, if the Australian corporate world ever turned honest and competent, Pierpont would be out of a job, but I can assure that's never been a worry that has kept him or me awake at night for a single second.[1]

You see, my one simple theme tonight is that in the financial world **no-one** learns from history. And this is nowhere more evident than in the history of booms and busts.

They've been going on for centuries. The causes, the cycle and the end result are always the same and nobody ever learns because they **all** think this time is going to be different.

In 2000, I attended a conference where the main speaker was David Hale, chief apostle of the new-age economies, who scorned Australia because we didn't have a soaring dot com sector like the United States. We were a bunch of hicks who weren't up with the new paradigm. Remember 'paradigm'?

My sympathy with those who were caught when the new paradigm turned into the latest train crash is zero. The lessons have been there to be learned for a long time. They were all there in the very first boom of which we have records. I am here to speak to you tonight about tulips and the boom and bust of 1636–37.

The tulip is a beautiful flower with a fascinating history. The first wild tulips appear to have been natives of the foothills of the high, cold, arid mountains of Tien-Shan, on the borders of Russia and China some 400 kilometres north of Tibet and 400 kilometres east of Tashkent. I've only ever seen those mountains once from 30 000 ft but they appear to be one of the most remote and inhospitable places on earth.

The wild tulips were somewhat different from modern tulips. The flowers were only a few inches above the ground and their only colour was red.

Tulips were admired by the locals, but there weren't many locals. To the north of the Tien-Shan mountains is the barren Russian Taiga. To the east is desert and to the

1. I started the Pierpont website four years ago. On an average day when I open it, the readers have brought one or two new scams to Pierpont's attention. The trouble is that they take a bit of research and Pierpont's lazy and so between us we can only cover one scam a week in the column. Which means we're falling behind rather badly. On my desk as I speak is a pile of A4 which I measured this afternoon at 15 inches. That's nearly 40 centimetres and every millimetre represents at least one scam that Pierpont hasn't got around to investigating yet. So on that backlog, Pierpont's still got plenty of material left.

south is the arid roof of the world stretching down through Tibet to the Himalayas. Approaches from the west are blocked by hostile tribes and the mountains themselves. And they're still remote. Even today, less than one in a million westerners would know more about Tien-Shan than they do about Mars.

Adventurous Turkish nomads pastured their horses in the valleys on the northern side of the mountain range. These nomads were sometimes traders but more often brigands. After holing up in the mountains during the desolate, freezing winter, their first sign of spring must have been the tulips: a break of scarlet in an otherwise hostile landscape. To those hardy horsemen, the flowers must have represented a renewal of life.

The hardy bulbs spread westward towards the Caspian Sea. Who first cultivated them will never be known, but certainly they were prized objects by 1050 in the gardens of Baghdad and in Isfahan, the old Turkish capital.

So Turks came to venerate the tulip. By the 14th century it was the most-prized flower of the Ottoman sultans. The letters which made up its name in Arabic were the same as those that made up the name of Allah, perhaps because when the tulip is in full flower, in modesty before God, it bows its head.

The original wild tulips were a round flower, but the Turks preferred to breed them long and narrow – roughly the difference between a Marie Antoinette champagne glass and a flute.

When Suleyman the Magnificent embarked on his campaigns in the 16th century, his royal armour was embossed with a single glorious tulip, nine inches long.

But for all these centuries, the West knew nothing of the tulip. The tulip was the flower of the east, primarily the Turks, and the only time westerners met the Turks was in battles such as the Field of Blackbirds at Kosovo in 1389, and on days like that you really can't blame the knights of the west much for not being focused on botany.

Sorry to spend so much time on remote botanical history, but I thought it well to explain why the long-delayed emergence of this exotic flower came as such a revelation to Western Europe. Its beauty was combined with exotic origins, connections with royalty and power, a sacred quality … And, for investors, rarity.

Exactly how and where the tulip made the transition from east to west is uncertain, but by 1559 it is recorded as being grown in Bavaria. The bulbs reached England by 1582. The first record of them in Holland is from 1562, where the first merchant to receive them had them roasted and eaten, under the impression they were Turkish onions.

Holland was not the first country to be infected by the craze for tulips. Parisians went mad about the beautiful blooms early in the 17th century, when ladies of the court wore them as a fashion item in their cleavage, doubtless to help display other assets. That practice lasted until about 1615, but in the time it lasted, tulips in Paris at one point were as expensive as diamonds.

The fashion of high-Parisian society was strongly adopted in northern France, where there are anecdotes of a miller exchanging his mill for a single bulb and a proud father whose dowry to his daughter was also a single bulb, which he had bred and named after her.

From northern France, passion for the bulb spread naturally into Holland. So the Dutch were actually late starters in the tulip craze, but this is understandable for two reasons.

The first is that the Dutch were already great traders and prosperous, but up until 1628 they were pre-occupied with their life or death fight for liberation from the Spanish. It was not until 1630 that the threat of invasion had receded far enough for the Dutch to disband their armed forces and concentrate on their main business of making money.

Money, indeed, is a very Dutch obsession. Their neighbours in Belgium say that copper wire was invented by two Dutchmen arguing over a penny.

The second reason the Dutch were slow off the mark was because of the length of time it took for tulips to become available in any volume.

Tulips can be grown from either seed or bulbs. Plants grown from a single seed from one flower can provide considerable variation, so that it is impossible to know exactly what sort of tulip will emerge. It takes six or seven years to produce a flowering bulb from a seed.

However, once a tulip grown from seed has matured and flowered, it can reproduce itself by producing outgrowths, known as offsets, from its bulb. Offsets can be pinched off by hand and in a year or two, become flowering bulbs themselves.

So growing tulips from offsets is faster, but has a disadvantage. Most tulip bulbs will produce only two or three offsets a year, and can do so for only a couple of years before the mother bulb becomes exhausted and dies. So if you strike a terrific new tulip variety, it can only multiply slowly from offsets. With luck, you might get 16 plants after four years.

The natural colour of the tulip is red. But by planned and accidental breeding, they began to develop riotous colours: red with yellow borders, purple with white borders and so on. These patterns excited the Dutch gardeners.

The colours were more intense than anything they had seen before and showed fantastic variety. The most highly prized tulips were almost entirely white or yellow, displaying flames of purple, red or brown running along the centres or edges of the petals.

The great irony of the boom, as is well known, is that this streaking was caused by a virus which is unique to tulips. A bulb which produced a uni-coloured bloom one year might become streaked the next and there was no way of predicting when or how this would happen. This feature was known as 'breaking'.

Once a mother bulb was infected with the virus, it rarely recovered. So it would continue breaking in dazzling patterns. Dutch breeders tried to induce breaking by binding half a normal bulb with a half-bulb that had broken, which later research proved to be the most effective way of transmitting the virus. However, there was still no way of predicting what the flower from the broken bulb would look like.

Indeed, the mystery of breaking remained unsolved until well into the 20th century, when researchers in London isolated the agent and named it the mosaic virus.

And in a sense, Holland was home to the tulips. By their very origins, tulips flourish in harsh conditions. They were peculiarly suited to the belt of poor, sandy soil which runs up the Dutch coast from Leiden to the city of Haarlem.

So much for history and botany. Let's get down to money.

There are four key foundation blocks for any hysterical boom.

First, a long period of growing prosperity in which the investing classes enjoy a rising tide of disposable income – as Australia enjoyed in the 1960s ahead of the nickel boom. And the deeper this prosperity spreads downward into society, the better the chance of a boom because disposable income is in the hands of people who are inexperienced at investing it.

Second, the arrival of an exciting new commodity or industry, such as railways in the United States in the mid-19th century or Silicon Valley in the late 20th. And, the early investors in that industry should be showing substantial returns, thereby attracting more risk capital. Typically, there is a long groundswell in a commodity price before it goes wild.

Third, within that commodity or industry there should be one or two star performers, such as Poseidon in the nickel boom or Microsoft in Silicon Valley.

Fourth, a marketplace that is liquid and unregulated enough for prices to explode.

By 1636, Holland had all four ingredients.

The merchants were growing rich on the Indies trade. Tulips were a status symbol and – as the years went by – were becoming increasingly accessible by the lower-paid members of society.

And there was a star performer. Rosen tulips were one of the most highly prized varieties, and the most highly prized of them all was the Semper Augustus.

It had a slender stem which carried the flower well clear of the leaves, showing off its colours to best effect. The base of the flower was solid blue, turning quickly to pure white, while slim blood-coloured flares shot up all six petals and around their tips.

By 1624 there were no more than a dozen Semper Augustus in existence. It was so rare that very few were traded, but it became a benchmark which dragged up the prices of all other tulips.

This is another feature of booms. In the diamond boom of the late 1970s, the benchmark was the D flawless diamond. When I interviewed Harry Oppenheimer at de Beers in 1980 he said he'd never seen one and had been asking his agents to find one for him. Nevertheless, D flawless prices set the market for all other stones. I hardly need observe that basing a boom on a leader which hardly ever trades adds an extra degree of instability to prices.

Everyone in Holland agreed that tulips were beautiful. **Now** came the widespread realisation that a fortune could be made from them. The prices of tulips had been rising steadily since their arrival in Holland. The early investors from 1630 were showing rich returns.

By 1633, tulips were becoming widely available in Holland, although the most prized were still scarce and expensive. But in 1633, we have the first recorded instance of tulips being used as money, when a house in the town of Hoorn changed hands for three bulbs.

From then, the prices started rising strongly. The wild peak of this boom lasted just two months, from the end of 1636 to the start of 1637.

Most of us here would have read the tulip chapter in Charles Mackay's classic book, *Extraordinary popular delusions and the madness of crowds*. But if you're really interested in the tulip craze, the best source I know is the inelegantly named *Tulipomania* by Mike Dash. The prices I quote tonight are from Dash.[2]

In the space of those two or three months, a tulip called Admirael de Man was bought for 15 guilders and resold for 175. This at a time when an artisan was earning 300 guilders a year. In the same timespan, a Generalissimo was bought for 95 guilders and resold for 900 – three times an artisan's annual wage. A Gouda priced at 100 guilders when the boom began rose to 750.

The Semper Augustus, priced at 5 500 guilders in 1633, hit 10 000 in January 1637. At that price only a handful of Dutchmen could have afforded it. It was enough to feed, clothe and house a Dutch family for half a lifetime. Or, enough to buy one of the grandest homes on the most fashionable Amsterdam canals for cash, complete with a coach-house and 80ft garden, at a time when Amsterdam property was the most expensive on earth.

At that date, a big-time merchant might have been making 20 000 guilders a year. So a single bulb of Semper Augustus was worth half his income. As a modern equivalent, one tulip bulb was worth half Rene Rivkin's income.

Not only bulbs were traded. The boom also produced a brisk market in the little offsets. As we all know, bulbs prosper best if they are lifted from the soil soon after the season's flowers have died. The buying and selling of bulbs therefore used to occur while they were out of the ground between June and September and could be inspected.

Offsets, however, take several years to mature. As the prices of bulbs began soaring, breeders began selling the offsets separately, and as soon as they appeared.

Buyers of offsets were taking two bets. One was that the flowers from the offset would look like the mother bulb. If the bulb broke unexpectedly, or was broken already, there was no guarantee what the flower would look like in a few years' time.

The second bet, of course, was that the price of tulips would continue rising. So we are now getting into rank speculation.

At first, bulb trading was crammed into four months of the year, as I have noted. But once you had a piece of paper giving you the right to an offset from a bulb, you could trade it all year round. So tulip trading became liberated from the calendar.

2. See C Mackay's *Extraordinary popular delusions and the madness of crowds*, Harmony Books, New York, 1980 and M Dash's *Tulipomania*, Three Pines Press, New York, 2001.

From the autumn of 1635, the bulb trade changed fundamentally. Instead of trading bulbs in season, florists began trading bulbs – and, importantly, offsets – in the ground.

Bulbs had already been used as a unit of exchange. Now they became a promissory note – a scrap of paper listing the variety and weight of the bulb, the name of the owner and the date upon which it would be lifted. Because the lifting date was usually several months away, this encouraged dealing in the piece of paper rather than the bulb.

What we are talking about here is a future.

The futures market was not entirely novel to Holland. The very earliest futures markets had been organised in Amsterdam 30 years earlier by merchants who traded in timber, hemp or spices on the Amsterdam Stock Exchange.

However, the traders in tulip futures were gambling upon an essentially unknown commodity. If I buy a future on BHP shares, I know what I'm getting upon delivery (or at least I hope I do).

But when I buy a future on a broken bulb I don't know what sort of flower I'll have upon delivery. And if it's an offset of a broken bulb, I won't know for two or three years.

But that no longer matters, because the buyer is no longer a botanist or gardener who wants to own a beautiful flower. The buyer is only interested in the bit of paper, which he hopes to trade at a profit.

So yes, the tulip was the underlying commodity that fuelled the boom of 1636–37, but in reality it was leveraged into a derivatives boom. And one of the characteristics of derivatives is that few of the traders are ever interested in final delivery.

So in Holland in 1636, it became perfectly normal for a florist to sell bulbs he could not deliver to buyers who did not have the cash to pay for them and no desire to plant them.

But there were two other important ingredients to this boom. The merchants who traded in timber and spice futures on the Amsterdam Stock Exchange were rich specialists. Investment on the stock exchange or in ships' cargoes required substantial capital.

In contrast, the tulip boom reached down to everyone and was not confined to Amsterdam. Nearly anyone could play.

The second ingredient was leverage. Where bulbs or offsets were not available for instant delivery, it was common to put only 10 per cent of the price down. Also, the buyers quickly worked out that they could build a fortune faster if they borrowed to buy tulips, or futures on tulips. So they began mortgaging their homes to play the bulb market.

I mentioned earlier that weights of bulbs were one indicator given to speculators. A healthy tulip bulb increases in size while in the ground. So if prices on weight stay constant, the bulb will increase in value as it grows.

Bulb weights were quoted by the ace, a measure borrowed from the goldsmith trade which equates to about one-twentieth of a gram. So from late 1634, breeders began selling bulbs by the ace. This was fairer, because previously a speculator might have bought a bulb without knowing whether it weighed 100 aces or 400. But it also inflamed speculation.

A Viceroy bulb grown by an Alkmaar merchant weighed 81 aces when it was planted in the autumn of 1635 and 415 aces when it was lifted in July 1636 – a five-fold increase. That was particularly dramatic, but if bulb prices even stayed constant, the Viceroy's value had increased fivefold also.

Artisans on low wages had been making money slowly. If a weaver scraped together, say, 50 guilders, he might buy a new loom and increment his income slightly. But if he invested the same amount on a bulb he could make a small fortune quickly by speculating on a commodity whose value **had never fallen**.

And if he leveraged by borrowing, he could make a medium to large fortune.

I'm not sure I need to give the rest of this speech, because we can all see where it's heading, can't we?

Understanding the pre-conditions for a boom are more important than understanding the reason for the top-out and bust, but I'll go through the motions anyway. The waiters can serve whatever they like, particularly booze, because we can really all fill in the blanks from here.

Until the summer of 1636, tulip trading had mainly been to connoisseurs or professionals. But in 1636, as far as we can judge, the weight of money seemed to be coming from the florists and artisans and less rich classes who had begun speculating in the trade.

I listed earlier the four requisites for a hysterical boom. We now have three of them. We have a prospering society with surplus investible cash. Not only are the rich investing but the middle classes are getting into the act, so there's volume. We have a prized commodity which has never fallen in price. We have a bunch of star performers, led by Semper Augustus. All we need is a marketplace.

Tulips were never traded on the Amsterdam Stock Exchange, which in any case only traded from noon until 2 pm. Tulips were an unregulated market.

Tulip trading happened in taverns, mostly in Haarlem, where the participants were quite frequently drunk. And sometimes the taverns doubled as brothels, which would seem about the perfect ambience for an unregulated derivatives market.

The taverns were very smoky and the inhabitants drank vast quantities of wine and beer. Each deal struck was followed by a toast. And this was in the days when wine in Dutch taverns was served in pewter pitchers that held anywhere from two pints to more than a gallon. The mania of December 1636 and January 1637 occurred in this drunken, licentious ambience.

The traders here were working class, with at best a second-hand knowledge of tulips. Auctions were held in the taverns. At each table there was a secretary who recorded the deals struck around his table and, of course, by early morning it was entirely possible that the secretary was no longer sober.

As one participant said: 'This trade must be done with an intoxicated head, and the bolder one is, the better'.

These taverns did not deal in the finest quality bulbs. The boom was really in the second and third-raters, right down to the penny dreadfuls of the day or, as they were known, common goods.

Common goods were not sold by the ace but by the half-pound or pound, and a basket of pound-goods might have contained anywhere from 50 to 100 bulbs of the poorest variety.

A parcel of one of the cheapest pound-goods, Gheele Croonen, which could have been had for as little as 20 guilders in September or October of 1636, was 1 200 guilders by January.

Switsers, a common variety, came on market at 60 guilders per pound in the autumn of 1636 but were 1 400 guilders by the end of January.

The deals were usually done on slates. A bidder would write down the price he wanted to pay, a seller would write down the price he would accept. The slates were passed to intermediaries nominated by the principals, who would write down what they considered a fair price, which was not necessarily in the middle.

The slates were passed back to the buyer and seller. If either of them did not agree, they would rub out the price. If the deal was struck, the buyer would pay a commission, usually around 3 guilders, to the seller. The commission was called 'wine money'.

One flaw in this system was that there were no credit checks. Buyers did not have to prove they had the money to pay for the bulbs. Sellers did not have to prove they owned the bulbs they sold. So the taverns combined unbridled speculation, stimulated by alcohol, while providing no safeguards for anyone.

Like most booms, the end came suddenly. On the first Tuesday in February, a group of florists gathered as usual in a Haarlem tavern to offer pound-goods for sale. One member offered a pound of Switsers for 1 250 guilders, a fair price in the market then. He received no bids. Nobody wanted to buy.

From there, panic spread in the market. Nobody wanted to buy tulips any more.

The collapse was so sudden and complete that there is virtually no information on post-boom prices. The only buyers left were a few rich connoisseurs who did not depend on the trade for their wealth.

According to one anecdote a tulip that had been worth 5 000 guilders before the crash was later sold for only 50. A bed which would have fetched 600 to 1 000 guilders in January, changed hands for only 6.

The collapse was total and very fast. Even the great modern computer-aided meltdown of October 1987 did not produce such instant eradication of wealth.

What happened was that the market had been killed from the bottom. The very cheapest tulips had been driven so high in price that there was nothing for new entrants in the market to buy (which looks a lot like the current Sydney real estate boom). With no fresh money coming in from the bottom, the boom lost its foundation.

And, of course, as soon as any over-priced commodity reaches its peak and turns, every trader becomes a seller trying to get out as quickly as possible and destroying prices as he sells down.

The pain of the crash was worst for those who had borrowed to speculate. Men who had pledged their farms and houses suddenly lost them. In the days before social security that meant the workhouse or starvation and probably early death.

A mortgage was an enforceable contract. Were the tavern deals also enforceable?

The courts and authorities of Holland grappled for some time with this question. They obviously did not want to get involved in endless litigation. Eventually they emerged with a compromise. Anyone who had undertaken to buy a bulb could either take it at the agreed price or forfeit for 3.5 per cent.

So an artisan who had agreed to buy bulbs for 1 000 guilders could escape the deal for 35 guilders. Many did so. The pain here was taken by the growers, who had stood to reap large profits and were now brought back to earth with a thud.

The greatest benefit of this ruling was that it unclogged the court system, which was free to go back to murder, theft and other more important phenomena.

So although the compromise doubtless caused great hardship in many cases, it was overall a sensible ruling which enabled the nation to get back to work again and kept the social fabric more or less intact. Modern judges – notably in the High Court – have rarely shown the same pragmatic sense.

We can laugh at the stupidity of the Dutch, but they can be forgiven. The world had never seen a crazy boom before.

Today we have no such excuses. There have been booms of some sort in nearly every decade of the past two centuries.

If the rest of us had properly learned what happened in the tulip boom, I suggest there would have been fewer booms and fewer disastrous busts. But every generation since has thought the tulips were irrelevant, and they're not. Every lesson we need to know about booms, about derivatives, about gearing, is all there, waiting to be learned.

Which brings me back to where I started.

If scientists and engineers didn't learn from history, every generation would be condemned to reinvent the wheel. But scientists and engineers do learn from history, and so we have seen heart transplants and men walking on the Moon. But when it comes to finance, every generation starts off afresh with flint axes.

I thank you for listening to me tonight.