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Orange County

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Introduction:

On December 6 1994, Orange County, a prosperous district in California, declared bankruptcy after suffering losses of around $1.6 billion from a wrong-way bet on interest rates in one of its principal investment pools. The pool was intended to be a conservative but profitable way of managing the countys cashflows, and those of 241 associated local government entities. Instead, it triggered the largest financial failure of a local government in US history.

Robert Citron, the hitherto widely respected Orange County treasurer who controlled the $7.5 billion pool, had riskily invested the pools funds in a leveraged portfolio of mainly interest-linked securities. His strategy depended on short-term interest rates remaining relatively low when compared with medium-term interest rates. But from February 1994, the Federal Reserve Bank began to raise US interest rates, causing many securities in Orange Countys investment pool to fall in value.

During much of 1994, Citron ignored the shift in the interest rate environment and the mounting paper losses in his portfolio. But by the end of 1994, demands for billions of dollars of collateral from Citrons Wall Street counterparties, and the threat of a run on deposits from spooked local government investors, created a liquidity trap that he could not escape.

Citron could not have undertaken such a risky investment strategy if his actions had been subject to informed and independent risk oversight, and detailed risk-averse investment guidelines. Following the debacle, Orange County revised many aspects of its control procedures and its financial governance, and established a stricter set of investment policies.

Lessons Learnt:

- Beware the unconstrained star performer, even when he or she has a long track record. Where theres excess reward, theres risk though it might take time to surface;
- If the organisational structure, planning and risk oversight mechanisms of an institution are fractured, it is easy for powerful individuals to hide risk in the gaps;
- Borrowing short and investing long means liquidity risk, as every bank knows;
- Risk-averse investors must tie investment objectives to investment actions by means of a strict framework of investment policies, guidelines, risk reporting and independent and expert oversight;
- Risk reporting should be complete, and easily comprehensible to independent professionals. Strategies that are not possible to explain to third parties should not be employed by the risk averse.

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The Story:

Orange County treasurer Robert Citron was no new kid on the block. He had been treasurer since 1972 and in early 1994, at about the time his investment strategy began to go sour, he survived an election that focused public attention on his financial management of the Orange County investment pool. Citron managed to convince voters that the criticisms, which turned out to be close to the mark, were politically motivated.

increasingly important part of the Orange County budget since the late 1970s, leading to a relaxation of the rules surrounding how funds could be invested. In addition to the county itself, municipal entities such as the Orange County cities of Anaheim and Irvine, along with various local government authorities and services, were attracted to the investment pool by the unusually good rates of return it offered.

These investors put money that they raised from taxes and other sources into the pool, in the hope that the cash would grow before they had to spend it on vital public services. Excess returns from the pool were particularly welcome in the early 1990s: the local political environment was set against raising taxes and local government finances were under increasing strain. Some municipal entities even began to borrow money to increase their pool investments. (According to some commentators, the excess returns over the years amounted to hundreds of millions of dollars and, in a limited sense, considerably offset the eventual loss.)

Few municipal investors in the pool quizzed Citron on how he worked his magic, or analysed independently the level of risk he was running to gain excess returns. They took comfort from the fact that Orange County was itself heavily invested in the pool. However, the board of supervisors that acted as the principal oversight for Citrons actions as Orange County treasurer lacked financial sophistication. Orange County also failed to surround Citron with a compensating infrastructure of strict investment policies, risk controls, regular and detailed reporting, and independent oversight. This mattered more and more as the aim of the pool gradually turned towards making, rather than managing, money.

Through the early 1990s, Citron enjoyed his growing importance as someone who conjured up extra money for public services. The amount of public money in the pool grew quickly until in 1994, Citron was investing $7.5 billion in US agency notes of various kinds. He was a popular port of call for salesmen from Wall Streets big brokerage firms, particularly those from securities giant Merrill Lynch. Later, these salesmen would say they were merely servicing an experienced and savvy investor, while Citron would claim he had been misled about the riskiness of the instruments.

One thing is certain: while the pool offered greater returns than those of similar cash management pools, it did so only by taking on more risk. In particular, Citron gambled that medium-term interest-bearing securities would maintain or increase their value. He used various techniques to leverage his $7.5 billion of funds into more than $20 billion of investments so that both the returns and the risks were multiplied.

One way he did this was to enter into contracts known as reverse repurchase agreements, which allowed him to use securities the pool had already purchased as collateral on further borrowings, and further cycles of investing. But these agreements left him vulnerable to calls for more collateral if the market value of the original collateral fell.

Citron also used around $2.8 billion of structured notes, or derivatives, to increase his bet on the structure of the interest rate yield curve. These included many inverse floaters notes whose coupon falls as interest rates rise as well as index amortising notes and collateralised mortgage obligations.

The relative complexity of the instruments, the daisy-chain structure of the portfolio and Citrons limited financial reporting made it difficult for independent critics to understand or prove how risky the strategy really was. But the end result is clear: the pool transformed short-term funds intended for vital public services into a risky and leveraged investment in medium-term financial instruments.

As long as short-term interest rates remained low, as they did in the early 1990s, Citrons bet on the relative value of medium-term interest rate-linked securities paid off and all concerned prospered. The strategy soured with a shift in policy by the Federal Reserve in February 1994. That month saw the first of a succession of hikes in interest rates that ultimately saw the Fed raise rates by some 2.25 per cent over the course of 1994. By November, the investment pool was in crisis as the value of its interest rate-sensitive medium-term investments sank, and calls for more collateral arrived from Wall Street.

Citrons counterparties prepared to seize and liquidate billions of dollars of the investment pools collateral, while the government entities that had invested in the fund, lacking credible reassurances, looked to withdraw their money. On December 1, Citron admitted the fund had lost around $1.5 billion or around 20 per cent of its value. He resigned on December 3, as Orange County officials desperately tried to work out an agreement with their Wall Street creditors.

That agreement proved elusive, and Wall Street institutions began to sell off the securities they held as collateral against their agreements with Orange County. The Orange County Board of Supervisors took legal advice and declared bankruptcy on December 6, a move that prevented investors withdrawing any more of their funds. It also set the scene for a public auction of Citrons investment portfolio so that the proceeds could be reinvested in safe, and liquid, short-dated government stock. By January 19, with this restructuring completed, Orange Countys financial firestorm was over but its losses had crystallised at around $1.69 billion. Some expert commentators have argued that it could have cut this bill if only it had had the nerve to hang onto some of Citrons investment portfolio.

But this makes little difference to the fundamental lessons to be learned from the debacle. Citron exposed a set of conservative investors with specific funding needs to a risky portfolio. He failed to communicate the extent of the market risk, or liquidity risk, to either the investors or to his supervisory board though he did not try to hide the fundamentals of his strategy. (Had he properly assessed and communicated the level of risk, the pool would not have attracted risk-averse funds in the first place.)

But it is wrong to blame one individual. The risk managers of Canadian investment bank CIBC recently compared the Orange County failure to that of Barings Bank, pointing out that in these otherwise very different debacles, the man in charge showed excellent results at first, and was therefore allowed to transact without proper surveillance or controls (Crouhy et al, 2001). Orange County is primarily a story of what happens when the desire for excess returns overrides risk oversight.

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The Aftermath: Restitution and Recovery

Citron eventually pleaded guilty to six felony counts. However, the charges were largely to do with a misallocation of returns between the county and other municipal entities, and Citron does not seem to have been motivated by personal gain of any direct and obvious kind. He paid a $100,000 fine and spent less than a year under house arrest.

If that seems a lenient sentence, then Orange Countys recovery was also swifter than might have been expected. It had to cut back on spending and social service provision, and in 1995 and 1996 it took on massive additional debt in the form of special long-term recovery bonds to cover its losses. But thanks to increased tax revenues from a buoyant local economy, it was able to exit from bankruptcy in only 18 months.

With new executives in charge, it instituted a series of governance structures and reforms. These included oversight committees, an internal auditor who reported directly to the supervisors, a commitment to long-range financial planning and a stricter written policy for investments. In December 1997, Moodys Investors Service rewarded the county with an investment grade rating for key borrowings.

The new Orange County investment policy statement establishes safety of principal, and liquidity, as the primary objectives of the fund, with yield as a secondary objective. More specifically it prohibits borrowing for investment purposes (ie, leverage), reverse repurchase agreements, most kinds of structured notes (such as inverse floaters) and derivatives such as options. The same document bans the treasury oversight committee and other designated employees from receiving gifts, and obliges them to disclose economic interests and conflicts of interest. The county treasurer now has to submit monthly reports to the investors and other key county officers that contain sufficient information to permit an informed outside reader to evaluate the performance of the investment programme.

On June 2, 1998, Orange County reached a massive $400 million settlement with Merrill Lynch, the firm it held most responsible for steering Citron towards what the county deemed risky and unsuitable securities. Thomas Hayes, who led the countys litigation, said he regarded the settlement as fair while Janice Mittermeier, Orange County CEO in its recovery period, said the resolution assures county taxpayers that those responsible for the losses that caused the countys bankruptcy are being held accountable.

Merrill Lynch maintained as part of the settlement that it had acted properly and professionally in our relationship with Orange County. It cited the costs, distraction and uncertainty of further litigation as the reason it had come to make such an expensive settlement, while assuring its investors that it had already fully reserved against such an outcome.

Together with settlements from more than 30 other securities houses, law firms and accountancy firms that the county held partly responsible for the losses, the money from Merrill Lynch meant that some 200 municipal and governmental agencies could be finally made good. In February 2000, officers appointed by the courts paid out around $864 million to various government entities that had suffered from the collapse. Five years on from the bankruptcy, it was a big day for the smaller creditors. But on the same day, Orange County supervisor Jim Silva reminded local reporters that the county itself was still paying off some $1.2 billion of the recovery bonds issued in 1995 and 1996 and would be for several decades, unless it was able to speed up repayments.

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Timeline: Pips Begin to Squeak in Orange County

February 1994: Fed makes the first of a series of interest rate hikes, and so threatens the directional bet on interest rates built into the Orange County investment pool.

September 1994: Orange County treasurer Robert Citron tries to calm growing fears among investors.

November 1994: Auditors find that the pool has massively lost value.

December 1, 1994: Citron confirms that the pool faces $1.5 billion loss.

December 3, 1994: Citron resigns.

December 6, 1994: Prompted by due date of certain repo transactions, Orange Country files for Chapter 9 protection.

May 2, 1995: US Bankruptcy Court endorses settlement of what is left in the investment pool. Some 241 participants get 77 cents in each dollar of their investment balance as a cash distribution.

November 19, 1996: Citron is sentenced to a year in jail and $100,000 fine.

December 17, 1997: Moodys Investors Service rewards the countys recovery and new investment policies with an investment grade rating for key county borrowings.

June 2, 1998: Orange County reaches a $400 million settlement of its lawsuit against Merrill Lynch.

February 25, 2000: Some 200 municipal and governmental agencies finally made good in a disbursement of $864 million. But Orange County continues to pay off the recovery bonds it issued in 1995/6 to fund the bulk of the pools losses.

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Web Resources and References:

Mark Baldassare, *When Government Fails: The Orange County Bankruptcy*, Public Policy Institute of California and the University of California Press, 1998. Overview available here.

Steven Cohen and William Eimicke, Is Public Entrepreneurship Ethical?: A Second Look at Theory and Practice, see section on The Financial Collapse of Orange County, which discusses the high regard in which Robert Citron was held before his fall from grace.

Michel Crouhy, Dan Galai and Robert Mark, *Risk Management*, McGraw-Hill, 2001, page 34, available through www.amazon.com

Richard Irving, County in Crisis, *Risk*, March 1995, pp. 27-33.

Philippe Jorion and Robert Roper, *Big Bets Gone Bad: Derivatives and Bankruptcy in Orange County*, Academic Press (1995), available through www.Amazon.com

Philippe Jorions Internet case study: Orange County Case - Using Value at Risk to Control Financial Risk

Orange County press release, Bankruptcy Court Will Hear Countys Case Against Investment Broker Merrill Lynch, December 1, 1995

Russ Banham, Local Hero, *Treasury and Risk Management Magazine*, October 19