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Tony Pyne

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THE EXCLUSION OF Y2K RELATED LOSSES FROM AVIATION INSURANCE POLICIES—PRACTICALITIES, POLITICS, AND LEGALITIES

TONY PYNE*

IN EARLY 1999, Australian multimillionaire entrepreneur and adventurer Dick Smith privately predicted that the Y2K bug would come to nothing and, as usual, he was essentially correct. An estimated $A920 billion was spent worldwide combating the bug, and now the recriminations are beginning. Was it a con? Was the public duped? Was it all a waste of money? Even if it was justified, does it withstand scrutiny on a cost/benefit basis? Whatever the answer, the aviation industry is one area that took this issue very seriously given the possible consequences. As is commonly known, many aircraft did not fly as the clock rolled over to 2000 (for lack of bookings!).

I was “lucky” enough to have a multidisciplinary involvement in this issue as an aircraft owner, a member of the Board of Australia’s Civil Aviation Safety Authority (CASA), and as an aviation lawyer advising Australia’s major airlines and insurers. I will deal with some issues arising in those roles below.

First, what was the Y2K bug supposed to be? The simplistic explanation most of us are familiar with is that many computers were programmed to identify the year portion of dates by two digits with the result that they may not have been able to differentiate between 1920 and 2020, for example, and/or would read the rollover to year 2000 as 1900. However, this was only the tip of the possible iceberg, especially in an aviation context. Potential aviation-related Y2K problems had a number of critical dates including:

* LL.M. (Lond.) F.R.A.E.S., Consultant in aviation law, Minter Ellison, Melbourne and Brisbane, Australia; Member of the Board of Civil Aviation Safety Authority Australia. I would like to thank Mike Smith and Peter Boys of CASA and John Buckley of Australian Aviation Underwriting Pool Pty Ltd for their input when preparing this paper.
AUGUST 21, 1999: Global Positioning Systems (GPS) could have suffered end of week rollover; i.e. run out of weeks, which they use to keep track of time. When the U.S. Air Force developed the GPS in the 1970s, the timing cycle was restricted to 1,024 weeks. Accordingly, it was predicted that some older units would run out of time at midnight on August 21, 1999, and GPS receivers would begin to look for satellites where they were located on January 6, 1980. The August date came and went with few difficulties—only the oldest (generally marine) equipment had irreversible problems. A few units took some amount of time to locate themselves on August 22, but eventually were able to accurately do so. The next block of 1,024 weeks expires in mid-2019.

SEPTEMBER 9, 1999 (9/9/99): some systems allocated 9999 as the end of a cycle or used it for miscellaneous or unallocated items. Errors on such systems were expected on this date as equipment ran to 9999 and halted, but in an aviation context, this did not materialize.

JANUARY 1, 2000: as with many systems, there was concern that they might fail as the date rolled over to the new millennium.

FEBRUARY 29, 2000: when Pope Gregory XIII introduced the Gregorian calendar, it provided for a turn of the century leap year only once every 400 years. Leap years generally fall in a year that has a number divisible by four. An exception is when the number is divisible by 100, unless it is also divisible by 400. Accordingly, 2000 is a leap year, whereas 1700, 1800, 1900, and 2100 are not. Programs that cannot differentiate 2000 as a leap year could have failed on the above date or caused downstream calculation problems.

OCTOBER 10, 2000: this is the first date when many systems may need and use a full eight digit date length.

DECEMBER 31, 2000: related to the leap year problem, some programs will not recognize 2000 as having 366 days, and so will have problems at the end of the year.

There may be other ongoing problems with systems which allocate dates in the future, such as reservations systems, records of product shelf-lives, maintenance cycle records, and systems

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1 It is interesting to note that the Gregorian calendar was only adopted by Great Britain in 1752, Russia in 1917, and Greece in 1923.
used for preparing business and production forecasts. Subtraction problems could show up in a week, a month, or a year or more into the future. Even Bill Gates has predicted ongoing problems. For instance, hidden errors in spreadsheet data and databases (such as financial databases) may take some time to be felt, and software that manipulates dates for calculations can have newly compliant Y2K data affected by any remaining non-compliant old data.

Newspaper headlines on and after January 1, 2000 trumpeted that the bug did not bite, which was generally true. No widespread chaos or failure of systems occurred, and those with twenty-twenty hindsight immediately “predicted” that there never would have been a major problem anyway, even if remedial work had not been done. (The evidence of financial institutions debunks this theory). Claims were made that it had all been a waste of money. The public certainly seemed to take a disinterested attitude with little panic, and even the large amounts of cash printed in anticipation of a bank withdrawal rush was not used. It was reported that cash withdrawals from UK banks on December 31, 1999 (53 million pounds) were not as great as on the same date in 1998 (60.7 million pounds). Concerns that there would be a run on gasoline supplies in the United States immediately prior to the rollover did not eventuate. However, there certainly were glitches on the rollover date, some potentially serious.

In Japan, a monitoring unit at one nuclear reactor failed and a temperature alarm sounded at another. Minor problems were reported at several U.S. nuclear power stations but were easily rectified, and some were ultimately considered not to be Y2K-related. Automatic fault detection programs at ground liaison stations for French Syracuse II military satellite systems were affected, but apparently with “no operational effect;” the system is the main link with French forces in Kosovo. NASA suffered “minor anomalies,” but they did not disrupt operations. Similar problems occurred at the U.S. Oak Ridge National Laboratories nuclear weapons plant. Databases at two Spanish nuclear power plants experienced problems but were shut down and replaced by backup systems. In Israel, government services, the financial sector, and the Defense Department had significant system problems.

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2 The Australian, Jan. 3, 2000, at 1. A major aircraft manufacturer is concerned about problems as far out as 2038.
The Gambia suffered widespread power failures, although again, they may not have been Y2K related. Hong Kong motorists' breath-testing equipment malfunctioned. An Australian Y2K countdown clock went haywire. There were minor problems in Malaysian hospitals. In South Korea, newborn babies were recorded as being 100 years old. Some banking and government computer problems were experienced in China. A New York video library fined a customer $139,000 for returning a video 100 years overdue!

A U.S. stock exchange discovered some incorrect stock price values, including one shown as $3,500 per share instead of $35. A German bank erroneously credited a customer with DM3.9 billion. Some Windows-based computers reverted to 1/1/80 instead of 1/1/00, but “it was easily fixed.” The U.S. Pentagon’s top secret spy satellite operations were blinded by problems with ground-based computers, despite the Pentagon having spent $3.8 billion to upgrade systems for 2000. Information was unreadable (and lost) for a three hour period and degraded for three days. The New Zealand TAB betting shops had a bumper season with punters “investing” the cash they had withdrawn from their banks as a millennium precaution. The computer in the library of a Sydney law firm dated items 1900 instead of 2000. This was not an uncommon problem and was shared by the Jacksonville Electric Authority in Jacksonville, Florida and NTUC in Singapore. A number of other systems printed 1980, 1982, or 1984 instead of the correct January 1, 2000 date. Airservices Australia had a failure of GPS time input into the state of the art TAAATS computerized ATC system, notwithstanding pre-2000 remedial work. Feed from the radar timing field, which uses time but not date, was patched into the TAAATS system, and the system continued to operate. Powering up aircraft Honeywell FMS systems for the first time in the new millennium produced a date error message, although the systems functioned satisfactorily and were easily fixed.

There were some easily fixed engine trend monitoring system problems. Some dialysis units needed corrective action to set the calendar date. The computer-regulated clock controlling church bells in a town in northern Italy went out of sync and caused the bells to chime at 6:15 a.m. on New Year’s Day. When the system was checked, the computer had recorded the date of

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1980 instead of 2000. Otherwise, Italy appears to have been remarkably Y2K problem-free.

The United States suffered a Y2K-related technical difficulty with the distribution of NOTAMs. The weather message switching center in Atlanta, Georgia failed to recognize and process certain types of NOTAMs because of a software problem involving a failure to recognize years ending in 0 in the NOTAM time and date code. The North American Electric Reliability Council reported that several electric utilities in North America had minor glitches with synchronization features of the clocks used in their energy management system computers, albeit a non-critical part of the system. In the United States, emergency 911 systems broke down during Y2K testing, leading to an increase in the number of police personnel on duty to compensate for malfunctions in the system. Low level wind shear alert systems failed at the Tampa, Denver, Atlanta, Orlando, Chicago O'Hare, and St. Louis airports during the rollover and displayed an error message. Normal operations were restored within two hours. Similar installations at Toledo, Lansing, Charleston, and Moline also had problems, but operations were not affected. A web site operated by the U.S. Naval Observatory, the nation's official timekeeper, marked the date as January 1, 19100! However, the problem did not affect the master clock in Washington, D.C., which has been keeping the nation's time since 1845. Kavouras graphic weather display systems at flight service stations in sixteen locations around the United States failed about ten minutes after the rollover, due to the data not updating properly. The system sent data bearing the date 2010, resulting in rejection of national weather service data and incorrect updates in the weather system. Service was restored in about ten minutes.

The payroll computer at the Deutsche Oper in Berlin wiped out government subsidies for families with children by wrongly computing the children's ages. It treated children born in 1990 as 90 years old and automatically stopped their child allowance. The Apple Macintosh version of the Dutch Postbank's Gironet software was not Y2K compliant, resulting in customers not being able to use all promised features.

There do not appear to have been any major aviation-related problems, even in countries which had been ranked at the lowest level of preparedness and in which ATC and radar problems had been forecast. Many possible explanations for this exist. For example, aviation equipment generally only comes from a few manufacturers, who ensured their products were function-
ing properly either pre- or post-sale. Many ATC systems are still manual systems (paper strips and shrimp boats as was the case even in Australia until a year or two ago). Ground based navigational aids such as NDB, VOR, and even ILS have no or little reliance on computers; the aviation system is always in contingency mode—aircraft have two or more engines and two or more flight crew, extra fuel is carried to guard against bad weather and diversions, and aviation systems are, by design, fail safe. The industry is used to contingency planning and, at least at major passenger operational level, is always in recovery mode to deal with service glitches. Accordingly, the concept of Y2K was taken in stride by aviation regulators and operators.

In addition, partly due to remediation efforts in the industry, it was predicted that the aviation industry would not suffer from airplanes falling out of the sky, but might have problems with business continuity resulting from Y2K issues with elevators, security systems, airport lighting, baggage, x-rays, car parks, flight information, aerobridges, passport readers, and check-in systems. In actuality, problems even in these areas were minimal.4

Vast amounts of money were spent on Y2K preparation and remediation work—$A920 billion worldwide, $A12 billion in Australia, some $A147 million and $A87 million respectively by Australia's two major airlines, $A2.3 billion by the Australian government (calculated to be the equivalent of about 50 years expenditure on medical research), $A115 million by the Commonwealth Bank of Australia, and $A400 million by Australia's major telecommunications company, Telstra. The U.S. government reputedly spent $100 billion.

The Small Business Association of Australia labeled the problem and expenditure as "the greatest con trick foisted upon business,"5 while, according to Fidel Castro, it was all a capitalist plot to boost spending on computer technology.6

Others point to the fact that there were no Y2K disruptions to key sectors in countries such as Cuba, Indonesia, the Philippines, Russia, China, Bulgaria, Vietnam, other areas of Asia, Argentina, Brazil, Chile, Colombia, Ecuador, Peru, the U.S., and 128 more countries in the world, even though many countries invested more money in Y2K preparations than the countries of the Group of Eight (G8).7

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4 David Learmount, Aerospace Beats Y2K Bug, FLIGHT INTERNATIONAL, Jan. 11, 2000, at 11, available in 2000 WL 9380386. According to Pierre Jeanniot, Director General of IATA, "No Y2K related incidents were reported from any of the eight regional monitoring centres jointly operated by IATA and (ICAO)." Id.

5 The Australian, Jan. 5, 2000, at 3.

6 The Australian, Jan. 4, 2000, at 6.

and in southern and eastern Europe to suggest that the issue was not really significant and that western countries were ripped off. However, three minor computers in the United States, known to have problems and deliberately left running, crashed completely at the millennium changeover. The truth of the matter probably lies somewhere inbetween. Professor Anthony Finkelstein of University College London noted:

The public was ignorant, the IT consultants were drawn by the lure of filthy lucre, the science policy experts were seized with a mad cow effect in which their advice ceased to be rational, the nutcases were declaring the end of the world and a sensible, empirically founded approach to the risk was lost.8

Professor Finkelstein reportedly warned against Y2K hysteria a year ago. Others, with twenty-twenty hindsight, now say that “[i]t was never going to be a disaster, with things like electricity and water failing [but it] is going to be about [minor] problems for business.”9 Most observers considered that the work had to be done or no one would have dealt with companies that failed to check and fix their systems.

Perhaps the most balanced comment is that of The Economist: “Sensible risk management meant fixing the show stoppers not fixing everything. That distinction was frequently lost on politicians who wanted to avoid blame for inaction, and ignored by IT consultants, who found bug squashing a handy source of revenue.”10

As long as the risk was real, and I believe it was, I tend to look at the matter from an insurance perspective in that the money spent was effectively a premium, and the hazard “insured” against did not occur. Policyholders make the same type of decision every day, and that is how underwriters make their money. Whether we got value for money in the present instance, I do not know. In my view, the safety aspects in the aviation arena made the effort essential. As a Telstra Y2K manager reportedly said, “it’s a bit like immunizing your child against po-

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9 THE AUSTRALIAN, Jan. 4, 2000, at 13 (quoting Graeme Inchley, Australian Federal Y2K program chief).
10 THE AUSTRALIAN, Jan. 11, 2000, at 32.
Whatever the reality, a number of benefits have been claimed for the effort. Many organizations have thought long and hard about their computer systems for the first time, cleared out old code, and invested in new, updated equipment. The opportunity was taken to clean up poorly implemented IT systems, ensure data integrity, and compile inventories of technological assets. Much of the $A12 billion spent in Australia was, logically, for new equipment rather than fixing old systems. The groundwork was laid for a possibly wiser approach to technological scares, in the future taking sensible precautions but not panicking. There was unprecedented sharing of information within industries, of which aviation is a prime example. This is particularly significant given the present globalization of the industry. Y2K was a good dry run for a globalized industry disaster plan. Y2K problems were found by many organizations, and had they not been fixed, there would have been problems especially in telecommunications (in Australia regarding mobiles, call centers, and billing). The position was similar with banks, with the Commonwealth Bank of Australia having to replace its entire credit card and check encoding systems. Some proactive organizations used Y2K as an investment strategy. For example, Australian power generation systems put in a fourth level of communications redundancy with a new satellite strategy. Additionally, non-Y2K related problems were found, identified, and fixed. Organizations were forced to make changes that will reposition them for the twenty-first century and provide a foundation to deal with new issues such as GST (in Australia), e-commerce, and the internet community. It prompted development of comprehensive disaster plans and better communications between boardroom and computer room, encouraging board members to learn about IT and the role of computer technology in their businesses. It encouraged better system integration in the aviation industry and improved knowledge of system recovery. Finally, having experienced August 21st, September 9th, January 1st, and February 9th without major issues, there is now a higher level of confidence in respect of Y2K matters (although some say that only 5% of problems could have been expected to have been experienced to date).

My own Y2K involvement as an aircraft owner is easy to deal with—nil to report. My Piper Twin Comanche was built in 1970 and, although it is well equipped to IFR charter standard, not even the navaids are computerized. Similarly, much of the Australian general aviation fleet uses less complex aircraft with less complex systems and little date dependency. As indicated earlier, Australia did not suffer any significant ATC or other aviation (or even aviation support) service failures, and my aircraft was lucky enough to escape the more serious non-Y2K problem of contaminated fuel. I also did not suffer a supplier Y2K problem.

As a member of the CASA Board and then chairman of the Board Audit Committee, I know that we took Y2K issues very seriously, both in respect of our own internal computer systems and in respect of external operators’ systems. As CASA also deals with the compulsory insurance requirements for charter and RPT passenger carrying operations under Part IVA of (Commonwealth) Civil Aviation (Carriers’ Liability) Act 1959,\textsuperscript{12} as amended, we were also involved in aviation insurance issues, discussed below.

While CASA itself does not have any immediate flight safety critical systems, we do have licensing, registration, and surveillance systems. The Board’s concern with respect to internal systems was to ensure that management dealt adequately with the issue and to monitor progress, particularly in respect of critical information systems such as licensing and medical records. At the end of the day we were able to sign off to the government that this information could not be lost or corrupted for Y2K reasons.

Although in many senses, Y2K in relation to operators was an industry issue rather than a regulatory one, CASA took a significant, largely educational role as many in the industry did not have relevant knowledge. The major airlines, major airport operators, and others were well ahead of the game and were implementing their own strategies, investigations, and procedures. Yet, many charter and third level operators and some maintenance organizations needed assistance.

Accordingly, CASA published a range of educational material, including a 124-page book entitled \textit{Aviation Y2K—An Operators Guide to the Year 2000 Readiness and Contingency}

\textsuperscript{12} Civil Aviation (Carrier’s Liability) Act 1959 § IVA (Commonwealth) [hereinafter CAA].
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PLANNING. CASA also ran or participated in seminars on the issue, particularly in an aviation context. The material explained the basics, gave relevant examples, and provided checklists and help lines, and even details of available Y2K tax concessions, legal, and insurance issues.

Other elements of the campaign consisted of promulgating an Airworthiness Advisory Circular (AAC1-104, "Year 2000 compliance for aircraft and related systems") and the Australian standard on Y2K compliance; establishing a Y2K information telephone service to answer industry enquiries; sponsoring a national conference on Y2K in aviation; publishing a series of articles in the aviation media and occasional fax newsletters on Y2K issues; and researching typical operators to discover the kinds of Y2K issues which needed to be addressed and using the results as a guide for subsequent education.

Relying largely on (Commonwealth) Year 2000 Information Disclosure Act 1999 legislation designed to aid the voluntary disclosure and exchange of Y2K information and remediation efforts (and providing protection from civil actions in relation thereto), CASA required all operators and providers of commercial aviation services in Australia, including maintenance organizations, airlines, charter operators, flying schools and airports, to complete a Statement of Accomplishment confirming that safety would not be compromised by computer-related or equipment date rollover problems. We also relied on section 28BE of (Commonwealth) Civil Aviation Act 1988, which requires AOC holders to take all steps necessary to ensure that every activity undertaken pursuant to the AOC is done with a reasonable degree of care and diligence.

The Statement of Accomplishment, required to be completed by September 30, 1999, called for an assurance from the relevant operators that "safety will not be compromised by computer or equipment date rollover problems," based on Y2K measures taken and information generally available to the operator on the date of the statement. CASA conducted an audit of a selection of operators’ statements.

Statements were received within a reasonable time from all but thirty operators nationwide. Those thirty were issued notices requiring them to show cause why their AOC or operating authorities should not be suspended or cancelled. This elicited statements from all but two operators, and statements from

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these were eventually obtained. Statements were obtained from international airlines serving Australia via the Department of Transport & Regional Services and the Department of Foreign Affairs & Trade.

The Statement of Accomplishment approach was very successful, and the United States, United Kingdom, and New Zealand civil aviation authorities followed this approach.

Notwithstanding Dick Smith’s private view, the Board, like many others in our position, treated Y2K issues extremely seriously in the interests of aviation safety. While some took the view that major issues would be failure of baggage carousel power supplies and similar problems (and were ultimately proven correct), we just did not know and, as a prudent Board, could not take (and did not contemplate taking) the risk. As an editorial in *The Australian* newspaper for January 3, 2000 noted, “[i]t is easy, with hindsight, to suggest that the Western world in particular overestimated the potential for Y2K catastrophe. Yet a wait-and-see approach to the Y2K bug was never an option. The risks were too great.”

Insurers became concerned about the potential for Y2K related losses and claims at an early stage. Given past losses in the London market in particular, the UK Treasury made it clear that insurance organizations had to “actively monitor and control aggregate Millennium exposure or otherwise face significant penalties.” UK authorities and various U.S. insurance commissioners actively ensured that solvency margins were maintained.

This general concern manifested itself in an aviation context primarily through a joint document issued by Lloyds Aviation Underwriters’ Association and Aviation Insurance Offices Association entitled “Millennium Management—Date Change Recognition in the Aviation Insurance Market.” The LAUA Note was accompanied by a proposed Aerospace Date Recognition Conformity Questionnaire, for completion by insured operators, and initial drafts of a proposed Date Recognition Exclusion Clause (AVN2000) and proposed draft partial writebacks, Date Recognition Limited Coverage Clauses AVN2001 (stated in the

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LAUA Note to be applicable to hull and aircraft liability insurance) and AVN2002 (stated to be applicable to non-aircraft liability policies). The LAUA Note sought to remind intermediaries and policyholders of certain basic insurance theory and practice [the relevant premise of which] is concerned with \textit{fortuity} [which] concept requires (unless it has been specifically agreed to the contrary by the relevant insurers) that a fortuitous event must first occur in order to give rise to a valid claim under a policy of insurance. . . . Given the extensive global debate on the subject of Y2K computer problems, it is clearly apparent the topic does not meet the criteria of a fortuity. Rather it is a well known, well described \textit{business risk}. It follows from this that unless specifically agreed by insurers to cover these perils, any possible Y2K risks or liability arising therefrom are \textit{not covered} under existing insurance policies.\textsuperscript{17}

On receipt of this material, I advised clients that whilst it is indeed a recognized principle of insurance law that, unless or even if otherwise agreed, insurance is only available against fortuituities, not certainties nor, probably, near certainties, and whilst the date recognition problem was well known, exactly where and when it would strike remained fortuitous. I was of the view that it was just not known what would occur on January 1, 2000 (or on the other relevant dates) and how any individual computer equipment would react. I considered the LAUA Note to be overly dogmatic and its description of the Y2K problem as “a well-known, well-described \textit{business risk}” to be an oversimplification.\textsuperscript{18} Even the term “risk” implies insurability.

Derrington and Ashton suggest that the fortuity principle generally only operates to vitiate the insured’s coverage when the damage is actually subjectively intended by him, there being “no rule of construction excluding from the cover loss caused by the wilful act or the fault of the insured, providing that it does not involve intentional loss.”\textsuperscript{19} Coverage is intended to provide against a contingency and not deliberate damage. However, an intention sufficient to vitiate coverage may be inferred where the result is clearly foreseeable,\textsuperscript{20} or the conduct of the insured may have been so grave that he courted the result and to that

\textsuperscript{17} \textit{Id.} The document went on to introduce the accompanying material allegedly “[h]aving explicitly clarified that current policies do not cover Y2K liabilities.” \textit{Id.}

\textsuperscript{18} \textit{Id.}

\textsuperscript{19} \textit{Derrington} \& \textit{Ashton, The Law of Liability Insurance} 8 (1990).

\textsuperscript{20} \textit{See} Hardy \textit{v. Motor Insurers’ Bureau}, [1964] 2 QB 745.
extent is regarded as having intended it.\textsuperscript{21} Whilst even a considerable degree of inadvertent negligence may not produce an inference of intent,\textsuperscript{22} if one completely ignored the Y2K issue, insurers would probably be entitled to deny indemnity under the policy. However, the issue in my view was not clear, and I considered the view advanced in the LAUA Note should not necessarily be taken at face value.

The seminal definition of insurance in \textit{Prudential Insurance Co. v. IRC}\textsuperscript{23} requires that there be uncertainty as to whether the insured event will happen or (principally in relation to life insurance) when it will happen. In the Y2K case, both arms of the test may be satisfied to some extent, but there remained an element of contingency.

The correct position was probably the middle ground: if no steps were taken by an insured to seek to identify and eliminate computer date recognition problems, then any such problems which manifested themselves would not be a fortuity or contingency. Conversely, if rigorous testing and elimination steps were taken by the insured, and problems still arose, such claims may be fortuitous and should be covered by policies in the absence of a specific exclusion not withstanding the LAUA view. However, the reality was that the placing of AVN2000 on policies would be non-negotiable, the LAUA Note indicating that aviation underwriters would require AVN2000 to be incorporated in policies at renewal or on attachment after June 1, 1998.

I note in passing that, effective July 1, 1997, the Insurance Contracts Act 1984 applied to all aviation insurance policies the proper law of which is that of Australia.\textsuperscript{24} Section 46 of the ICA provides that an insurer cannot rely on pre-existing defects and imperfections where the insured or a reasonable person in the circumstances would not be aware of them, either to exclude or limit liability.\textsuperscript{25} This also raised the issue of whether the Y2K problem generally is sufficient for insurers to use an endorsement such as AVN2000, or whether the insured must know of the actual defect. Other relevant ICA provisions included those concerning utmost good faith, notice provisions, and section 54,

\begin{footnotes}
\item[23] [1904] 2 KB 658.
\item[25] See ICA § 46, supra note 24.
\end{footnotes}
which requires that the breach of any policy exclusion that is relied on by an insurer to deny indemnity must be causally related to the loss.

There was nothing in most aviation hull/all risks liability policies which excluded insurers' liability to indemnify for Y2K-originating loss, damage, or liability, notwithstanding the suggestion in the LAUA Note that "any possible Y2K risks or liability arising therefrom are NOT COVERED under existing insurance policies," and that the note had "explicitly clarified that current policies do not cover Y2K liabilities." The statement in the LAUA note that AVN2000 "makes clear that no cover applies," suggests that, contrary to the LAUA contention, that was not already clear from policies. However, the reality was that AVN2000 would be added to policy renewals.

The Conformity Questionnaire was a formidable and significant document inquiring in some detail into each operator's Y2K status and actions being taken to prepare for the millennium. The Conformity Questionnaire was extremely wide-ranging in that operators effectively had to reply not only for themselves, but also with regard to the preparedness of suppliers and others with whom they had arrangements, "including without limitation" suppliers, subcontractors, and contractual indemnities. The questions were very broad, and some of them were almost impossible to answer in the negative.

More particularly, the initial draft of the Conformity Questionnaire proposed that operators sign off under a warranty to the effect that all reasonably necessary steps had been taken to ensure that answers were true, that material facts had not been omitted, and that the operator agreed that material provided in the questionnaire "shall form part of the basis of any subsequent contract of insurance." As answers to some of the questions would not be known to some operators, how could they be warranted?

It concerned me that completion of the Conformity Questionnaire could presume the operators' acceptance in that existing policies did not extend to provide cover for date recognition

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26 LAUA Note, supra note 16.
27 Id. at 2.
problems and that they would accept incorporation of AVN2000 in future policies.

A subsequent version of the Conformity Questionnaire,\(^\text{29}\) now entitled Application for (Date) Recognition Limited Coverage Clause, was toned down and had the warranty and basis statement removed altogether. However, the questions were substantially unchanged, and the document still indicated that insurers considered responses "material to their decision to issue" an AVN2000 endorsement.\(^\text{30}\) It is mildly amusing, given the new title of the document, that operators were to "apply" to have their cover substantially limited.

The proposed AVN2000 Date Recognition Exclusion Clause was extremely broad and applied to claims arising from the failure or inability of computer equipment to process any change of date, year, or time. It applied across the entire coverage given under aviation policies. Even if Y2K failures themselves were not fortuitous, the LAUA view, AVN2000 contained wording potentially wide enough to exclude cover for computer problems even if not related to Y2K, for example, damage due to computer viruses. Much of the wording was of very wide effect. AVN2000 was particularly onerous in that it extended not only to failures of computer equipment in the operator’s possession, but also to that in the possession of any third party supplier from which the operator took services (such as travel agents, flight planning organizations, meteorological providers, air traffic control) and to the actions of third parties. While those exposures may have been able to be managed when negotiating arrangements with third parties, or by amendment to existing contracts, ultimately, the operator had no real control over such third parties and would have been far better protected by having insurance coverage with respect of their own exposure in relation to such matters.

Although AVN2000 was a practical \textit{fait accompli}, it was proposed, depending on responses to the Conformity Questionnaire, to provide the limited writebacks in AVN2001 and AVN2002 "for crucial coverage linked solely to hull damage and liability arising out of an accident to an aircraft."\(^\text{31}\) It was never entirely clear what the distinction between AVN2001 and 2002

\(^{29}\) See Lloyds Aviation Underwriter’s Assoc. & Aviation Insurance Offices Assoc., Application for (Date) Recognition Limited Coverage Clause, Sept. 10, 1998.

\(^{30}\) Id.

\(^{31}\) LAUA note p.2.
was intended to be. The LAUA Note stated that the original (April 22, 1998) version of AVN2001 was “applicable to aircraft operators policies” and AVN2002 to “all other aviation/aerospace liability policies.” A subsequent note from a LAUA Y2K committee member suggested that AVN2001 applied to aircraft operations and AVN2002 applied to non-aircraft operations. The final versions (October 22, 1998) of the writebacks described themselves as “applicable to hull and aircraft liability coverage” (AVN2001) and to “non aircraft liability only” (AVN2002). Although the theme was consistent, some confusion was created.

However, the scheme of AVN2000 and AVN2001/AVN2002 removed and did not restore the already existing coverage in a number of areas. The original AVN2001 appeared to reinstate coverage under aviation policies in respect of:

- accidental loss of or damage to insured aircraft;
- accidental bodily injury or death of passengers directly caused by an accident to an insured aircraft;
- loss of or damage to baggage and personal articles of passengers, mail and cargo directly caused by an accident to an insured aircraft; and
- accidental bodily injury and death and accidental damage to property directly caused by an insured aircraft or any person or object falling therefrom.

AVN2001 was subsequently modified, and the final version was improved in part by deleting the term “directly” in the above terms of coverage, thus marginally widening the writeback.

AVN2002 appeared to reinstate the coverage for sums an insured entity was liable to pay (including costs awarded against it) in respect of accidental bodily injury, fatal or otherwise, or loss of or damage to property caused by an aircraft accident. AVN2002 never used the term “directly” caused by an aircraft accident.

The original versions of the endorsements contained identical provisos in respect of coverage, making it clear, for example, that coverage was not available under the endorsement for grounding and/or loss of use of an aircraft which had not been

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32 LAUA Note, supra note 16.
34 AVN2001, supra note 34 (emphasis added).
physically damaged or destroyed in the accident giving rise to a claim under the policy (proviso 2). This proviso was subsequently expanded in different terms in each writeback, further limiting writeback coverage in respect of loss of use of "property" (previously "aircraft") and, in the case of AVN2002, also in respect of coverage in excess of scheduled underlying insurance and/or in respect of non-aviation risks.

Proviso 1 stated that coverage provided pursuant to the AVN2001/2002 was subject to the terms and conditions of the policy, and nothing in the endorsements extended coverage beyond that provided by the policy. This was not changed in subsequent versions.

Proviso 3 incorporated by reference the answers, statements, and information given in the Conformity Questionnaire, and rather broadly warranted the truth of such matters and that no material information had been omitted. This set up warranties concerning material matters to the possible detriment of the insured, but was amended in later versions (which also incorporated the original proviso 4 into proviso 3) toning down the strictness and arguably ameliorating the effect.

Proviso 4 introduced a continuing obligation to disclose in writing any additional material or facts relating to date recognition conformity of the insured’s operations, equipment, and products, and provides that "in the event of such disclosure, the coverage provided by this Endorsement shall terminate automatically." The apparent result of this proviso was that if further information concerning date recognition conformity was discovered and quite properly (and by obligation) made known to insurers, the AVN2001/2002 coverage would be lost. (Similarly, it would be lost if the information was not made known to the insurers). It was my view that this could not have been the real intention of proviso 4. These elements were deleted, and proviso 4 was combined with proviso 3 in subsequent versions.

Proviso 5 excluded coverage of other parties having an interest in the policy, particularly pursuant to AVN67B or other lease finance endorsements, in the event of breach of provisos 3 and 4 by the insured airline. Such gap in coverage had the poten-

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36 See id.
37 See id.
38 Id.
39 See id.
tial to trigger an act of default under common aircraft financing arrangements. Proviso 5 was deleted from the final versions of AVN2001 and 2002.

A quick review of a major operator’s aviation hull and liability policy wording suggested that, except to the extent that certain of the following relate to accidental loss of or damage to an insured aircraft, at least the original AVN2001 did not write back cover for: personal injury as defined; bodily injury not due to an aircraft accident (discussed further below); property damage other than as specified; disappearance of aircraft; loss of use due to loss of technical records (an area of particular Y2K exposure); the innocent operator provision; aircraft spares; aircrew baggage (other than as passengers); certain additional expenses; shops and restaurants; certain excess liabilities; and AVN67B protection.41

Some of the above, such as AVN67B in respect of aircraft financing arrangements, may have been covered by the final version of AVN2001 (specifically the deletion of proviso 5), but others remained an issue.

Similar considerations applied in respect of AVN2002 except that it appeared to apply to liabilities “caused by an aircraft accident” (as opposed to an accident involving an insured aircraft as in AVN2001). The final version of AVN2002 also wrote back cover “caused by an accident, other than an aircraft accident” in certain circumstances.42

As indicated, AVN2001 and 2002 were subsequently modified to some extent to take account of realities, but many of the above initial concerns were not eliminated.

Effective on January 20, 1996, Part IVA of the CAA required Australian charter and RPT operators and international operators serving Australia to carry insurance of at least $A500,000 (for domestic operations) and SDR260,000 (for international operations) in respect of death or injury of all of their passengers, but not for baggage or cargo claims. Further, it severely limited the underwriters’ ability to refuse indemnity even in the face of policy breaches by operators (at least in respect of policies the proper law of which was that of Australia). Operators cannot carry passengers to which Parts II (Warsaw/Hague), III (Warsaw), or IV (domestic or non-Convention international car-

40 See AVN2001, supra note 34.
41 See id.
42 See AVN2002, supra note 35.
riage) of the CAA apply unless there is an “acceptable contract of insurance” in force with an appropriate insurer.\(^4\)

An “acceptable contract of insurance” is one in respect of which the carrier has obtained from its insurers a declaration that the policy complies with the CAA, submits the declaration to CASA, and obtains from it a certificate stating that CASA is satisfied that the policy meets the “prescribed requirements” of the CAA, one of which is that the insurer’s liability to indemnify is not affected by “any breach of a safety-related requirement imposed by or under any Act or by the Civil Aviation Safety Authority.”\(^4\) Obviously, this provision is of major significance to underwriters.

Furthermore, an insurer cannot rely on any warranty or exclusion in the policy or any breach of the contract of insurance by the carrier except as provided in the regulations. The allowable exclusions are: the standard Aviation Radioactive Contamination Exclusion clause (General), AVN38; the standard Noise and Pollution and Other Perils Exclusion clause, AVN46B; the standard War, Hijacking, and Other Perils Exclusion clause (Aviation), AVN48B; liability for employees of a carrier travelling in the course of their employment; and liability for passengers not traveling in a type of aircraft notified to CASA and endorsed on the policy.\(^4\)

In summary, the insurer cannot rely on any warranty or exclusion in the policy or any breach of the insurance contract by the carrier except for the above exclusions allowed by the regulations pursuant to the CAA. Accordingly, AVN2000, standing alone without writeback, would clearly offend Part IVA and could not be relied upon by insurers to deny indemnity for liability under the CAA for death or personal injuries suffered by a passenger carried by air. AVN2000 did not fit within any of the exclusions allowed by the CAA and regulations, and would be defeated by section 41D\(^4\) of the CAA and, possibly, by other provisions of Part IVA.

\(^{43}\) CAA § 41E, supra note 1. For general background and discussion of the legislation, see Tony Pyne, Fifteen Years of Developments in Air Carrier Legal Liability, (1997) 46 Z.L.W. 68, 90. See also Tony Pyne, Developments in Australian Carriers’ Liability Legislation, [1996-97] TAQ 78.

\(^{44}\) CAA § 41C(4)(a), supra note 12. Similar provisions exist in the United States, Canada, and Switzerland.

\(^{45}\) See id. § 41D.

\(^{46}\) See infra note 1 and accompanying text.
More problematic, however, is whether any policy containing such provision (without write-back) would render an operator's policy, in respect of passenger aviation legal liabilities, not to be an "acceptable contract of insurance" for the purposes of Part IVA. In such a case, section 41E would operate to prohibit the operator from carrying passengers for fear of breaching and possibly losing its AOC, as well as fear of prosecution. Given the definitions of "contract of insurance" and "personal injury liability" in section 41B of Part IVA, read with section 41C(7), I consider a policy with AVN2000 endorsed cannot be an "acceptable contract of insurance." A similar result would occur if the view was taken that AVN2000 (indirectly) amounted to a provision which enabled insurers to deny indemnity for breach of a safety related requirement imposed by an Act or by CASA.

Section 41D refers to "insurers liability . . . to indemnify the carrier against personal injury liability to the extent mentioned in subsection 41C(3)" ($A500,000 for domestic carriage and SDR260,000 for international carriage). The preferable interpretation of these words suggests that section 41D only has effect to the section 41C(3) limits and that, considering that many carriers have voluntarily agreed to increased or unlimited liability for death or injury of passengers, underwriters could rely on breaches of warranties or exclusions to deny indemnity for claims exceeding $A500,000/SDR260,000 with or without the writebacks. This would involve a gap in coverage which did not offend the CAA.

For the above reasons, I anticipated that the Australian authorities would resist approving, for the purposes of Part IVA, a policy containing AVN2000. The actual developments in this regard are discussed further below.

Would the AVN2001/2002 writeback clauses assist? Original and final versions of both did so, but not to the full extent necessary.

AVN2001 provided a writeback for "accidental bodily injury (fatal or otherwise) to passengers [directly] caused by an accident to an Insured Aircraft." AVN2002 wrote back liability "in respect of accidental bodily injury (fatal or otherwise) . . . caused by an air-

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47 See CAA § 41B, supra note 12.
48 See id. § 41C(7).
49 See id. § 41C(4)(a).
50 Id. § 41D (emphasis added).
51 AVN2001, supra note 34 (emphasis added).
Liabilities, for which non-voidable coverage is required for passengers under Part IVA, are wider than that "caused by an accident to an Insured Aircraft" (AVN2001) and that "caused by an aircraft accident" (AVN2002), although the latter may, on one interpretation, cover accidents relating to an aircraft, but not involving an aircraft. The Warsaw and related Conventions in the CAA and Part IV concerning domestic carriage extend to death or injury of passengers by accident on board an aircraft or in the course of any of the operations of embarking or disembarking. These circumstances are far broader than those involving an accident to an aircraft itself.

In addition, Part IV of the CAA, referring to domestic carriage, applies to "personal injury" of passengers, which is wider than the "bodily injury" referred to in AVN2001 and AVN2002 (and defined "for the avoidance of doubt" in AVN2002).

Further perceived difficulties involved the use of the term "accidental" in the writebacks and some aspects of the original provisos 1, 3, 4, and 5.

In order for a policy with AVN2000, even with the writebacks, to remain an "acceptable contract of insurance," the writebacks needed to be broadened to cover passenger death or injury in all circumstances covered by the CAA or AVN2000, with or without the writebacks, need to be expressed as subordinate to the CAA or be excluded from the ambit of Part IVA. However, the latter solution would leave carriers without adequate insurance coverage in certain areas even with the writebacks in place.

An example of the type of Y2K situation that could have fallen outside coverage under a policy with AVN2000 and AVN2001 would be one in which a passenger was boarding an aircraft and, due to a Y2K-related malfunction, the aerobridge retracted as he/she stepped off it, and the passenger fell to the tarmac and was injured. As the passenger was boarding the aircraft, the air-

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52 AVN2002, supra note 35 (emphasis added).

line would be liable, but there would be no coverage under a policy with AVN2000 and AVN2001. This also illustrates why the policy would not be an “acceptable contract of insurance” (with all the ramifications that entails) unless AVN2000 was abandoned or AVN2001 broadened. The final version of AVN2002 may extend coverage sufficiently, but that endorsement is expressed to relate to “non Aircraft Liability only” and may not have been added to an operator’s policy.

Accordingly, subject to the above in respect of AVN2000, even with the AVN2001/2002 writebacks, carriers would have remained exposed in effect to certain passenger claims although section 41D of the CAA could have been expected to operate to prevent insurers from denying those claims (at least up to the section 41C(3) levels) as the CAA and regulations then stood. Similar limitations are included in respect of passenger baggage and cargo, and these did not enjoy the Part IVA protections.

Naturally, all of the above caused consternation to Australia’s major carriers, and political and regulatory authorities. Interestingly, one of Australia’s major carriers had a preference for using Part IVA to render AVN2000 on relevant policies unenforceable, whereas the preferred approach of the other was to go along with AVN2000 while ensuring that the writebacks fully restored cover so as not to offend Part IVA. As we shall see, the latter course ultimately prevailed.

On April 19, 1999, the U.S. Department of Transportation issued a notice regarding Y2K aviation insurance issues. Although it was ambiguous and unclear in many respects, it did state in heavy type: “We wish to make clear, however, that the Department has not approved any insurance arrangement for Y2K-related problems that does not provide continuous coverage meeting the minimum coverage requirements set forth in Part 205 [of the Federal Aviation Regulations].”

However, it made it clear that its Y2K prohibition only applied to the minimum amount of coverage required under Part 205.

Typically, Australia adopted a novel approach. Effective August 12, 1998, the AVN2000 endorsement was included as an allowable exclusion under the Civil Aviation (Carriers’ Liability) Regulations 1998. However, such inclusion was self-canceling on August 19, 1999, a couple of days prior to the first significant

54 Notice from United States Department of Transportation, Apr. 19, 1999 [hereinafter Notice].
date recognition problem milestone of August 21, 1999 relating to GPS. This approach allowed AVN2000 to be added to policies, thereby enabling such policies to continue to be “acceptable contract(s) of insurance” for the purposes of Part IVA, but being self-canceling before AVN2000 would effectively “bite.” It was adopted to accommodate insurers’ insistence on adding AVN2000 to policies, while giving authorities time to decide how to proceed.

Of course, CASA was heavily involved in discussions regarding the way to proceed. The issue was one of the most difficult policy and legal questions which had arisen for some time. There was much seesawing of positions, and misinformation abounded. Options considered included continuing to accept AVN2000 as a permissible exclusion after August 21, 1999, on condition that it was accompanied by AVN2001 (an option suggested by LAUA), or just allowing the AVN2000 Part IVA protection to disappear in August. The latter could have led to the Australian Part IVA endorsement AVN57A and equivalents either (a) taking precedence over AVN2000 and requiring insurers to cover millennium bug incidents, or (b) not doing so, in which case there would be no coverage for such incidents and operators would not have “acceptable contract(s) of insurance” with all the ramifications that entailed.

The latter was not a feasible scenario, but the distinction between it and the first scenario turned on whether AVN57A in policies had the effect of overriding and effectively rendering useless any AVN2000 endorsement (whether with or without the writebacks) on Australian operators’ policies.

CASA obtained several legal opinions, initially to the effect that it should refrain from issuing a certificate under section 41C(7) of the CAA (1) when a policy was endorsed with both AVN57A and AVN2000 in their forms as of July 1998 because it was not clear that the former would prevail over the latter, and (2) when a policy was endorsed with both AVN57A and AVN2000, together with either of AVN2001 or AVN2002, because the latter did not go far enough to ensure that all liability required by the CAA would be insured.

56 AVN57A is the London endorsement on policies included to ensure they comply with Part IVA of the CAA. Other wordings to similar effect, although not identical, prepared by me are used by Australia’s two major local aviation insurers.
However, the view was taken that CASA would be justified in issuing a section 41C(7) certificate (1) where a policy was endorsed with AVN57A and an amended form of AVN2000, which provided that the former prevailed over the latter or (2) where a policy was endorsed with AVN57A, AVN2000 and an amended form of AVN2001 or 2002, where those amendments had the effect of ensuring coverage in compliance with the CAA.

The above legal advice, confirmatory advice from another firm, and my own view was that it was far from certain that a court would interpret endorsement AVN57A as prevailing over AVN2000 for a number of reasons. First, the very existence of endorsements AVN2001 and AVN2002 implied that AVN2000 was thought otherwise to prevail over AVN57A. Second, AVN57A was drafted in the language of a grant of coverage with a series of operative clauses and some exclusions, but AVN2000 was described as and drafted in the language of an exclusion clause. The various versions of AVN2001 and AVN2002 purported to modify the operation of AVN2000, but were in some places recited (including in the title) as grants of coverage. Finally, much depended on the location and timing of the various provisions in the policy. For example, if AVN57A was written into the body of the policy and AVN2000 was an endorsement, principles of construction would suggest that the latter would override the former and vice versa. Similarly, if AVN2000 was a subsequent addition to a policy containing AVN57A, general principles of construction would suggest that it was intended to modify AVN57A.

In or about June 1999, CASA notified AOC holders that the government had decided that the temporary AVN2000 provision in the Civil Aviation Regulations (Carriers' Liability) would not be extended beyond the August 19, 1999 cutoff date. The government's decision followed the U.S. Department of Transportation's announcement that the United States would not approve passenger liability insurance coverage for airlines where insurance policies contained date recognition exclusions. Accordingly, it was stated that CASA would not issue certificates of compliance under the Act in relation to contracts of insurance containing AVN2000 or similar exclusions for a period extending beyond August 19, 1999 because, in CASA's opinion, AVN2001 did not adequately write back the exclusions con-

57 See Notice, supra note 56 and accompanying text.
tained in AVN2000. What was not mentioned in the letter was the concern that AVN57A did not override AVN2000.

As can be imagined, the CASA letter caused some consternation. LAUA took the view that it was always the intention that policies issued in the London market would comply with Australian law and that insurers believed it was quite clear that AVN57A overrode AVN2000. LAUA considered that the history of AVN57A showed that insurers accepted from the outset that its terms overrode all others in the policy relating to passenger legal liability and up to the limits required by the relevant legislation. It was further stated that if AVN2001 was attached with AVN2000, the full coverage required by the legislation would be in effect, including, if not already provided by the policy, the required personal injuries coverage by reason of paragraph 5 of AVN57A. While I accept the bona fides of the market, I do not accept the latter contention as at all clear.

A London market wording guru indicated that he found CASA's legal advice strange in that AVN2000/2001/2002 would be added to any policies at their renewal date and, as such, become part of such policies, whereas AVN57A was and would always remain an endorsement, "reattached" for each policy period. As such, it would remain a "clause paramount." Expressed in those terms, this view is correct but AVN2000 and AVN2001 appear to be endorsements and would arguably be paramount if (1) AVN57A was part of the policy and was overridden by such endorsements, or (2) the AVN57A and the AVN2000 series were all endorsements, but the latter were added at a date after AVN57A.

The impasse continued until late in the day when the Australian Government Solicitor provided an opinion to the effect that AVN57A overrode AVN2000 and the writebacks, and that CASA could issue a certificate under section 41C(7) of the Act in respect of policies containing both clauses. This conclusion was assisted by reference to section 41D, which prevented insurers from relying on any exclusions not permitted by the CAA or Regulations.

Although I remained concerned that AVN57A would not override AVN2000 in all circumstances, I was content to rely on the Australian Government Solicitor's opinion for practical purposes. In reliance on that opinion, CASA continued to issue section 41C(7) certificates for policies with AVN57A, AVN2000, and
AVN2001 endorsements for coverage on and after August 20, 1999.\textsuperscript{58}

However, from an operator's point of view, section 41G(b) of the CAA should be kept in mind. That provision enables underwriters, who make payments to passengers under the policy, which they would not otherwise have had to make except for the effect of Part IVA, to recover such amounts from the operator.\textsuperscript{59} As far as I am aware, this provision has not yet been utilized, and it has some difficulties, but it will be interesting to see whether any claims under it arise in connection with Y2K issues.

Speaking of claims, lest you think that the poor old lawyers have missed out on a Y2K failure litigation bonanza with lucrative pickings, a legal action has been commenced in the UK against computer consultants for allegedly exaggerating the Y2K threat and putting in place an unnecessarily expensive fix. Other foreshadowed legal actions are insurance disputes for remediation costs, warranty claims over contractual representations, shareholder claims against boards of directors for spending too much on Y2K, and shareholder claims against boards of directors for spending too little on Y2K. I'm sure my legal brethren will come up with others.

1998 and 1999 were interesting for me and many others in relation to Y2K and related issues. Thankfully, four of the significant dates have now passed with a whimper rather than a bang, and although some problems have arisen and more can be expected, the hope and prediction is that they will be minor. In an aviation context in particular, the Y2K experience has seen a truly global industry pull together to avert potential disaster, gain experience for future disaster planning on a global basis, and build confidence. Y2K prompted the first integrated global contingency plan, the model for which can be used to address future global issues.

\textsuperscript{58} The AGS opinion correctly noted that AVN2001 does not fully meet the requirements of the Act, and a policy with AVN2000 and AVN2001 would not be an "acceptable contract of insurance" unless AVN57A was also included.

\textsuperscript{59} See clause 6 of AVN57A.