FREDRIC E. RUSSELL
INVESTMENT MANAGEMENT CO.

INVESTMENT LETTER

RESMED, INC. (NYSE: RMD)

Our Motto: *To write investment letters that are readable,* ***without soporific jargon,*** *but with pertinent facts not easily obtained in the ordinary course of research*

Introduction

Man has always understood that sleep is indispensible, especially when he could not get enough of it. When Shakespeare, for example, was besieged by insomnia, he wondered whether he had done something to offend the powers that made sleep possible. He wrote: 'O sleep, o gentle sleep, nature's soft nurse, how have I frightened thee, that thou no more wilt weigh my eyelids down and steep my senses in forgetfulness?'

Shakespeare had no wish to offend the powers of sleep because he knew how important sleep is. Shakespeare knew that 'sleep knits the raveled sleeve of care.' Sleep, he understood was 'the balm of hurt minds, great nature's second course.' Shakespeare knew that there was no substitute for sleep.

Today good sleep is more imperative than ever, yet it may be harder to get than ever. Many forces---the complexity and fast pace of our lives, noise, endless interruptions, and illnesses that compromise the quality of sleep, illnesses such as sleep apnea---often make a good night's sleep painfully elusive.

Below I discuss the physiological dynamics of sleep apnea, the market for sleep apnea, and I write about my personal experience with sleep apnea. I also describe the work that ResMed, Inc. (NYSE: RMD) is doing to help me, and millions of others, to control sleep apnea and to get a good night's sleep, work that makes ResMed, Inc. an excellent investment.

Wednesday, September 16, 2009 on the Turner Turnpike headed from Tulsa to Oklahoma City

I was headed west to Oklahoma City from Tulsa on the Turner Turnpike, a ninety one mile well maintained four lane toll road that connects Oklahoma's two most important urban centers. The vista was flat. Occasionally I would see some horses, some cows, but otherwise the scenery was unremarkable, and so predictable as to encourage the drivers to move fast, to get to the end of the road so they could put an end to their boredom.

The Oklahoma Turnpike Authority keeps the Turner Turnpike in good shape and allows a seventy five mile an hour speed limit. Virtually all drivers ignore the limit, especially when they are headed to Oklahoma City and then on to Norman, Oklahoma on a Saturday to watch the Sooners play football. This flouting of the law can produce some uncomfortable moments, especially if you are headed back to Tulsa on a Saturday evening when the Sooners, playing a home football game in Norman (which is thirty miles south of Oklahoma City) have lost. When this cataclysmic event occurs, the fans that live in Tulsa, understandably frustrated with the game's disappointing outcome, drive carelessly and aggressively, with their reckless driving aggravated by significant amounts of liquor consumption. At these times it is best to be in the right hand lane, obeying the speed limit, and not looking for trouble.

Today there was no football game but it was raining, and therefore it was smart to be cautious. I was in the right hand lane, driving a little under the speed limit, and virtually every car and truck was passing me. This was fine with me; I was not in a rush, I was not competing with the other drivers to see who could get to Oklahoma City first. I was happy to concede the passing lane to the other drivers as I had all I could handle trying to stay alert as the big trucks, when they passed me, would spin off rivers of rain, making it difficult to steer and making it difficult to see, forcing my heart rate up. As the trucks passed me, I marveled at the great responsibility that the drivers had for everyone's safety, and I thought of how much energy it took to drive their trucks the distances they did every day. And I was reminded of an article that I had read the week before about sleep apnea.

I stayed alert and soon I was at the end of the turnpike. A few miles later, I was at the Metro Wine Bar and Bistro in Nichols Hills where I had a most enjoyable dinner with my longtime friend.

Drinking some coffee the next morning in Tulsa I had some time to think about the previous day's experience on the Turner Turnpike and to think about the danger that the truck drivers represented: twenty eight per cent of truck drivers in the United States have sleep apnea. Unfortunately, truck drivers are by no means the only group suffering from sleep apnea. In the United States, one in five adults, in fact, has some form of sleep apnea.

Equally disturbing, ignorance about sleep apnea is widespread. Despite the high prevalence of sleep apnea in the United States, there is a deep lack of awareness of it among the medical community and the public. It is estimated that less than ten per cent of those with sleep apnea have been diagnosed or treated. Many healthcare professionals are often unable to diagnose sleep apnea because they are unaware that such non-specific symptoms as excessive daytime sleepiness, snoring, hypertension and irritability are characteristic of sleep apnea. Furthermore, medical schools give little attention to sleep apnea.

Sleep apnea is a highly debilitating condition but it is often suffered silently. Sleep apneas or awakenings savagely compromise the quality of sleep and its repair factor but the individual is often not aware of the awakenings or the interruptions caused by breathing difficulties even though these disruptions can be frequent, occurring more than ten times per hour. Even when he awakens the sufferer is often not aware of these breathing difficulties. Symptoms may be present for years without identification, during which time the sufferer may become conditioned to the daytime sleepiness and fatigue that comes with significant sleep disturbance or sleep inefficiency.

What Is Sleep Apnea?

There are three forms of sleep apnea: central, obstructive, and complex (i.e., a combination of central and obstructive), with obstructive sleep apnea constituting the vast majority of apneas, or more than eighty per cent of the cases.

In obstructive sleep apnea breathing is interrupted by a physical block to airflow despite respiratory effort. The breathing passage narrows and the apnea sufferer cannot breathe and then awakens, gasping for breath. *(ResMed, Inc., Form 10-K for the Fiscal Year Ended June 30, 2009, page four)*

Sleep is a complex neurological process that includes two distinct states: rapid eye movement, or REM sleep, and non-rapid eye movement, or non-REM sleep. REM sleep, which is about twenty to twenty five per cent of total sleep experienced by adults, is characterized by a high level of brain activity, bursts of rapid eye movement, increased heart and respiration rates, and paralysis of many muscles. Non-REM sleep is

subdivided into four stages that generally parallel sleep depth; stage one is the lightest and stage four is the deepest. The important thing to remember is that with any of the three sleep apnea conditions, you not only lose quantities of sleep, but you suffer loss of sleep quality.

Many snorers have sleep apnea. But the snoring itself is not destructive, even if is an indication of the presence of sleep apnea. It is when the snoring stops that trouble is present. When the snoring stops and the individual misses one breath, you have what is called an apnea or episode, that is, an uncomfortable period with no breathing. (Episode is medical jargon for experience or event.) When breathing starts again, there is typically a deep gasp, and then the snoring resumes. Breaks or interruptions in breathing produce a lowering of blood oxygen concentration, causing the central nervous system to react to the lack of oxygen or increased carbon dioxide and signaling the body to respond as follows: the individual subconsciously arouses from sleep, causing the throat muscles to contract, opening the airway. (Of course one can have sleep apnea without snoring.)

> After a few gasping breaths, blood oxygen levels increase and the individual can resume a deeper sleep until the cycle repeats itself. Airways normally narrow during REM sleep and during deeper levels of non-REM sleep. But if the upper airway is narrow to begin with and there is poor muscle tone, two conditions aggravated by obesity, then the upper airway will frequently collapse during sleep leading to a temporary blockage of the upper airway (apnea) or to a near closure of the upper airway called hypoapnea. *(ResMed, Inc., Form 10-K, for the Fiscal Year Ended June 30, 2009, page five.)*

Sleep Apnea: A pause in breathing or a severe interruption in breathing?

Sleep apnea is most commonly defined as a pause in breathing, with the pause lasting at least ten seconds.

I have a problem with this definition. The person who suffers from sleep apnea does not will or solicit a break, or a pause, or a stop in sleeping but instead, much more realistically, suffers an involuntary break, a highly dangerous, nerve-wracking moment when he stops breathing and struggles for air, gasping to catch his or her breath. He does not want to stop breathing, he does not want to take a pause in his breathing. Suddenly, however, he cannot breathe, he wakes up, desperate to breath, frightened and wondering what caused the cessation in breathing. Certainly an anxious interruption with great physical tension is dramatically different from the sensation or experience that Coca-Cola evoked with its slogan 'the pause that refreshes," a powerfully effective phrase that suggested that pause from work, obligation, or worry was what the Coke drinker sought, and that this pause would be most effectively satisfied by drinking a few ounces of Coca-Cola.

Pause has pleasant connotations whereas interruption, an involuntary loss of control, an uninvited break in the sleeping rhythm, a compromise of the harmonic experience that good sleep means, is an experience that no one would wish for themselves.

Apneas, furthermore, can come at the worst possible time during the night, the time when the brain is engaged in REM sleep, or heavy non-REM sleep, the two periods that afford us the greatest rest, the most spectacular rejuvenation. Without dreams, a function of REM sleep, the individual never truly achieves the ideal restful stage. His peace of mind is never achieved because his harmony and rhythm are compromised by interruptions in his breathing, a breathing that is not effortless but instead is labored, desperate and frenzied, especially when the sufferer believes that he is about to choke to death. Apneas are not benign or painless pauses but instead are periods in which the sleeper strenuously or and desperately tries to breathe, episodes during which if the sufferer awakes, he believes he may die.

The answer to sleep apnea

Before 1981, the primary treatment for obstructive sleep apnea was a tracheotomy, a surgical procedure in which the surgeon cuts a hole in the patient's windpipe to create a channel for airflow. More recently, alternative treatments have involved either uvulopalatopharyngoplasty, or UPPP, in which surgery is performed on the upper airway to remove excess tissue and to streamline the shape of the airway, implanting a device to add support to the soft tissue, or mandibular advancement, in which the lower jaw is moved forward to widen the patient's airway. These techniques have not been wildly successful and they are expensive. *(ResMed, Inc.10-K, Form 10-K for the Fiscal Year Ended June 30, 2009, page five)*

In 198l a breakthrough occurred when Dr. Colin Sullivan and his associates in Sydney, Australia came up with a machine that employed continuous positive airway pressure (CPAP) to send humidified air into the throat, keeping it wide enough so that the patient could breathe and not have to gasp for breath, and not have to interrupt his or her sleep. How does this mechanism work? The continuous positive airway pressure device 'splints' the patient's airway open during sleep by means of a flow of pressurized air into the throat. The first machines were bulky and noisy but the companies that make these machines have over the years streamlined the machines, reduced the noise, and made them easier to operate and have created a vibrant industry. *ResMed, Inc. Form 10-K for the Fiscal Year Ended June 30, 2009, page five.)*

ResMed, Inc. (NYSE:RMD): **Investment Thesis**

Sleep is critical for functioning, for survival. One common sleep disorder is sleep apnea, a condition that disrupts sleep and lowers the quality and efficacy of sleep, night after night. Millions of people have sleep apnea but only ten per cent of those who have it have had treatment, giving huge market opportunity for ResMed, which along with Respironics, Inc., a division of Philips (NYSE:PHG), dominates the business of serving millions who suffer from sleep apnea. (In the last ten years ResMed has been steadily gaining market share from Respironics.)

Just as sleep apnea leads to unsaturated oxygen levels in the brain, the market for sleep apnea treatment is undeveloped and unsaturated.

As with any company, ResMed faces risks, must recognize these risks, and must surmount these risks. One risk, that may be misunderstood, is the issue of reimbursement by insurance companies, Medicare and the government insurance entities of foreign countries. True, there is rising pressure to control healthcare costs, yet increasingly insurance bodies consider the fight against sleep apnea to be a contest against diabetes, cardiovascular problems, stroke, and even cancer and these bodies are increasingly willing to support the fight against sleep apnea as it is considered to have a comorbidity with these diseases.

RESMED PRODUCES LOTS OF CASH, YEAR AFTER YEAR

RESMED INC. AND SUBSIDIARIES

Consolidated Statements of Cash Flows

Fiscal Years ended June 30, 2009, 2008 and 2007

(In thousands)

PERIOD ENDING	**30-Jun-09**	**30-Jun-08**	**30-Jun-07**
Net Income	**146,448**	**110,303**	**66,302**
Operating Activities, Cash Flows Provided By or Used In			
Depreciation	53,963	59,485	48,141
Adjustments To Net Income	15,341	32,927	46,358
Changes In Accounts Receivables	(32,897)	(16,083)	(25,612)
Changes In Liabilities	51,247	(69,043)	(1,581)
Changes In Inventories	(16,141)	9,605	(30,467)
Changes In Other Operating Activities	20,916	10,642	(12,035)
Total Cash Flow From Operating Activities	**238,877**	**137,836**	**91,106**
Investing Activities, Cash Flows Provided By or Used In			
Capital Expenditures	(109,692)	(75,779)	(77,556)
Investments	(2,267)	17,168	(20,362)
Other Cash flows from Investing Activities	2,660	20,758	(7,499)
Total Cash Flows From Investing Activities	**(109,299)**	**(37,853)**	**(105,417)**
Financing Activities, Cash Flows Provided By or Used In			
Dividends Paid	-	-	-
Sale (Purchase) of Stock	(43,701)	(74,930)	36,168
Net Borrowings	41,702	7,360	(10,470)
Other Cash Flows from Financing Activities	3,870	3,813	12,398
Total Cash Flows From Financing Activities	**1,871**	**(63,757)**	**38,096**
Effect Of Exchange Rate Changes	(36,877)	27,060	14,463
Change In Cash and Cash Equivalents	**$94,572**	**$63,286**	**38,248**

Sleep apnea has devastating effects

Sleep apnea is associated with, or shares comorbidity with cardiovascular disease, stroke, high blood pressure, hypertension, arrhythmias, diabetes, and accidents. Sleep apnea runs with a bad crowd, and is responsible for significant amounts of our annual healthcare bill.

A strong association has been discovered between obstructive sleep apnea and a number of cardiovascular diseases. Recent studies have shown that SDB is present in approximately 80% of patients with drug-resistant hypertension, approximately 72% of patients with type 2 diabetes and approximately 80% of patients with congestive heart failure. In relation to diabetes, recent studies indicate that SDB is independently associated with glucose intolerance and insulin resistance.

Sleep apnea can cause hypoxemia (poor oxygenation of the blood); hypercapnia (too much carbon dioxide in the blood); metabolic dysregulation (poor regulation of the body's metabolic systems, usually predisposing the sufferer of poor sleep to gain weight.) Sleep apnea will also produce arrhythmias (unwelcome or involuntary change in the strength or the frequency of the heart beat); myocardial infarction (heart attack) and finally, perhaps the most devastating effect of sleep apnea: stroke.

Sleep apnea's effect on weight gain has its own cruel irony: weight gain often leads to sleep apnea which in turn makes it difficult to regulate or control metabolism, making it difficult to efficiently convert calories to energy, predisposing the individual to overeating. Another sad irony of sleep apnea is that poor or compromised sleeping will produce fatigue which makes it more difficult to exercise and to fight calories.

Sleep apnea afflicts at least twenty million people in the United States and most of these people are overweight.

As I sipped my coffee I asked myself a question whose answer, I suspected, I had been avoiding for some time: could I have sleep apnea?

My profile suggested a likely candidacy for sleep apnea. Even though I did a lot of exercise, especially competitive swimming, the fact was that I was past fifty and I was overweight, two leading markers for sleep apnea. Also, I would frequently wake up in the middle of the night and have difficulty getting back to sleep, and I was often tired during the day.

I promised myself that as soon as I could I would make an appointment with a sleep laboratory to have my sleeping patterns and my sleeping quality checked through a polysomnogram, or sleep study. (Polysomnogram (PSG) is a multi-parametric test used in the study of sleep and as a diagnostic tool in sleep medicine. *Wikipedia, 2009*)

Yours Truly Undergoes a Polysomnogram

I knew that there was a sleep lab in the Siegfried Tower at the St. John Health System that could tell me whether I had a sleep disorder, and how severe it was.

The sleep lab's official name is the St. John Medical Center Sleep Lab. I arranged for an appointment during which I was asked to describe a typical night of sleeping. Next, a doctor interviewed me, asking me what I did during the night when I awakened. The interview over, I headed back to the receptionist desk and was told to check in to the sleep lab that evening between 7:30 and 8 P.M, and to make sure to bring my pajamas, my toothbrush, and anything else that was part of my evening routine.

The sleep lab at St. John is an interesting place. There are five single rooms, and there is a control center where several technicians or nurses monitor each patient's heart rate, blood pressure, oxygen saturation and other forces in play while you sleep, or try to sleep. There is also a mechanism affixed to the ceiling in every room that permits the technician to observe you as you sleep or toss and turn, or whatever you do during the night.

I checked in a little before 8 P.M. After asking me to fill out the usual forms and papers the technician told me he would be back at 9:30 PM to hook me up to electrodes which would measure respiratory factors, sleep patterns, heart rate, and blood oxygen levels. After the electrodes were in place the technician, who was as patient and gentle as I could have wished, told me that he would start the test as soon as he returned to the control room. So at a few minutes after ten o'clock the polysomnogram began.

For two hundred and forty eight and three tenths minutes, or for a period that lasted a few seconds more than four hours and eight minutes, I suffered sixty one apneas. Of these, fifty six were identified as obstructive apneas, one was a mixed apnea, and four were central apneas. (Clinically significant levels of sleep apnea are defined as five or more episodes per hour of any type of apnea.)

There was no doubt: I suffered from a serious case of sleep apnea.

My episodes produced an apnea index (AI) of 18.1 apneas/hour of sleep. As the technician monitored my efforts to get to sleep it must have been apparent that I was not sleeping well, as the report below suggests.

> **SLEEP ARCHITECTURE & STAGING:** The diagnostic portion of the study began at 10:08:45 PM and ended at 2:17:02 AM, for a recording time of 248.3 minutes. The sleep period lasted 232.0 minutes and the total sleep time (TST) was 202.0 minutes, which resulted in sleep efficiency (TST + TRT) of 81.4%. The sleep latency (SL) was 16.3 minutes, and the latency to the first occurrence of Stage R was 148.0 minutes. There were 1 Stage R periods observed on this study night, 8 awakenings (i.e. transitions to Stage W from any sleep stage), and 18 total stage transitions. Wake after sleep onset (WASO) time accounted for 3.0 minutes, while the time spent in each sleep stage was 1.5 minutes (Stage N1); 192.5 minutes (Stage N2); 0.0 minutes (Stage N3); and 8.0 minutes (stage R). The percentage of Total Sleep Time in each stage was: 0.7% (Stage N1); 95.3% (Stage N2); 0.0% (Stage N3); and 4.0% (Stage R).

Once the technician had concluded that there was no doubt that I suffered from sleep apnea he opened my door and told me that the second phase of the sleep study would now begin. He told me he would place a mask over my face and use a plastic hose to connect the mask to a machine which would blow humidified air through the airway into my throat.

The results were remarkable and reassuring. The report showed that the treatment time (time spent with the mask and the machine) was one hundred and sixty one minutes and fifty four seconds or a little more than two hours and forty one minutes.

During the second stage or the treatment stage of the polysomnogram I experienced no apneas. Also, I did not experience any arousals during the treatment segment of the night. When, later in the morning, I was given a copy of these results, I was highly encouraged. I knew now that not only would I be able to sleep, but, with a little discipline and planning, I could lose weight, not encumbered by a driving urge to consume sweets to fight the low blood sugar that excessive fatigue, brought upon by sleep apnea, produces.

In the morning Steve Gruenwald, M.D. came into my room and confirmed what the night's study had shown: I had a severe case of sleep apnea. He showed me the report, excerpts of which are printed above, produced by the lab's diagnostic machines. The first section of the report was alarming, and instructive, but the second part of the polysomnogram showed that once I was fitted with the proper gear to control the sleep apnea, the results were highly reassuring. I now have a ResMed mask, with carefully designed plastic covers to fit the contour of a human face, and every night I use a plastic hose to connect the mask to a machine which pumps humidified air through my nasal passageways. I have been sleeping remarkably well since I got my mask and machine.

I was ecstatic. If I could swim more than a mile every morning at a fast pace, if I could run a demanding business, and write quirky but, I believe, entertaining and informative letters that require dedication and energy, all on less than six hours of poor sleep, what could I do with seven or eight hours of good sleep, sleep with deep REM stages?

As I have become older, I have tried to achieve a harmonious balance between ambition, striving for intangibles and tangibles that I do not have, and gratitude for the emotional satisfaction and the material objects that I do have. I can tell you that I have a great deal of gratitude for the ResMed mask and machine. The other night, while lying in my bed, listening to the smooth but powerful hiss of the machine, I thought about the state of treatment for sleep apnea before the invention of the masks and the machines that ResMed and its competitors have developed. I feel deep gratitude to Dr. Colin Sullivan who pioneered the continuous positive airway pressure machines which ResMed has improved upon and which I now use.

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As of November 5, 2009, clients, officers, shareholders, and employees of the Fredric E. Russell Investment Management Co. have a position in ResMed, Inc., a position of 49,500 shares, with an average weighted cost of $47.15. We may liquidate, decrease, or increase these positions at any time, without notice before or after we do so.

The writer of this report, Fredric E. Russell, has paid his dues with the following degrees: B.A., Swarthmore College, Swarthmore, PA; M.B.A, and M.A., Washington University, St. Louis, MO. He also holds the CPA certificate, and has taught accounting and finance at the university level. He believes his love for writing and his usually correct grammar come from spending four years learning the English language at Deerfield Academy in Deerfield, MA, and from reading everything well written he can find.