

Quote of the Week : “When we run out of money, we have to start thinking” - Winston Churchill.

Vice-Admiral Joseph Mulloy, Deputy Chief of Naval Operations for Capabilities & Resources, on February 25th told the House Armed Services Committee’s Seapower and Projection Forces Subcommittee that China now has a larger submarine fleet than the US, & is building some “fairly amazing submarines”, both nuclear-, & diesel-, powered, & increasing their geographical area of deployment & length of time at sea (*their growing presence in the Indian Ocean has become a serious issue for India*). Earlier in the month the Washington-based conservative Heritage Foundation had come out with a report Assessing America’s Ability to Provide for the Common Defense that, *understandably given the source*, concluded the US Armed Forces are underfunded & “the current US military force is adequate for meeting the demands of a single regional conflict ... (but) would be hard-pressed ... (and) ill-equipped to handle two, nearly simultaneous, major regional contingencies”, rating the Army, Navy, Marine Corps & Nuclear Capabilities elements’ condition as “Marginal” & only that of the Air Force as “Strong”. And another recent report, this one by the University of California Institute on Global Conflict and Cooperation, concluded “China’s improving space capabilities have negative-sum consequences for US military security.”

These days Washington politicians never seem able to agree on anything, with one exception : from Elizabeth Warren through Hilary Clinton & Marco Rubio to Ted Cruz they all agree that power, success & wealth is becoming increasingly a function of birth rather than of talent & hard work, i.e. American society is becoming increasingly aristocratic rather than meritocratic, *and the ‘American Dream’ is under siege*. And the January 24th issue of The Economist on the subject reprinted a College Board chart showing there indeed appears to be a strong correlation between family incomes and SAT scores in reading, writing & arithmetic - *another case of politicians bewailing something that’s within their-, & only their-, power to change, if they really felt strongly about it.*

Things are happening in the solar industry. In the past several years the solar power business has been on a tear. According to the EIA, US utility-generated solar power output grew from 1,212 GWh in 2010 to 9,253 GWh in 2013 & 18,321 GWh in 2014 (i.e. from 0.03% to 0.45% of the total) while according to the NREL¹ **total** distributed solar power went from 4,505 GWh in 2010 to 21,074 GWh in 2013 (i.e from 0.11% to 0.52% of the national total)². Recently the US stock market seems to have woken up to this; for having slid from its early 2011 high of 1,500 by 75% 18 months later, & having dawdled in the 750 - 900 range in 2014 (ending the year at the low end thereof), Bloomberg’s Global Solar Energy Index went from 783.39 last January 20th to 1,097.49 on Friday March 6th, up 40% in 32 trading days, a compound **daily** growth rate of 1.05%³ (although it did then stop for breath, gaining only 31 points during the next three weeks). Most of this is driven by the fact that, with the cost of solar panels having declined by 80%, or

¹ The Dept. of Energy-funded, Golden, Col.-based National Renewable Energy Laboratory

² The difference between the two is that the latter includes the power generated from non utility-owned solar panels, many of them on residential rooftops.

³ Worldwide the trend seems to have been similar with installed solar capacity having more than tripled between 2010 & 2014 and expected to do so again by 2020.

more⁴⁵, solar power is now, by many accounts, competitive with natural gas-fueled power (as borne out by California-based Recurrent Energy⁶ last May entering into 20-year, 150 MW 5¢/kWh Power Purchase Agreement with Austin, Texas-based Austin Energy).

Longer term, the outlook for solar power may be more promising than for wind. Solar power installations are less unsightly than wind farms, noise pollution-free & don't kill birds. It is more predictable than wind since the sun rises & sets in a predictable way while wind comes & goes as it pleases (& *contrary to popular belief solar panels will produce power when it is cloudy, albeit at a lesser rate*), and produces power when it is most needed, during the daytime hours of peak demand. Last but not least, compared to conventional power stations, solar power generating facilities can be built in a fraction of the time it takes to build conventional power plants &, while the latter must be built on a "lumpy" basis, solar power expansion can be done incrementally.

One argument often made by renewable energy detractors is that solar requires subsidization. But energy industry subsidies are nothing new . For a September 2011 study by Nancy Pfund & Ben Healey⁷ entitled What would Jefferson do? The Historical Role of Federal Subsidies in Shaping America's Energy Future⁸ found that, in 2010 dollars & taking all direct & indirect, overt & covert, federal (*only*) subsidies into account, oil & gas had averaged annual subsidies of US\$4.86BN over 81 years, the nuclear industry S\$3.50BN annually over 52 years, biofuels S\$1.08BN annually over 39 years, & "green renewable energy" US\$0.37BN annually over 15 years - *and while it is one thing to subsidize an "infant" industry, it's a horse of a different colour to subsidize "mature" ones.*

Amidst all the euphoria about the fracking-driven growing US 'energy sufficiency' it has gone unnoticed that, according to the sustainable leadership advocacy group Ceres, based on 2011 data, the fracking of 40,000 wells in the US that year had taken 97 BN litres of water⁹, and that 75% of those wells were located where water supplies are scarce, & over half in regions under drought conditions. And the same source reported last January that US & European investors had begun to question the wisdom of investing hundreds of billions of dollars to develop hydrocarbon reserves that need prices of US\$90, or better, to return a profit. Finally, last May, at

⁴ One of the reasons for the mistaken impression that the solar industry is in deep doo-doo, is the fact that many solar panel producers have gone TU (while the slack has been taken up by their more adaptable competitors and/or new entrants to the industry with lower cost structures).

⁵ The effect of which, going forward, will be offset somewhat by the US in December penalizing Chinese solar panels with tariffs of up to 70% (& those from Taiwan up to 27.55%) and Canada following suit earlier this month with tariffs of up to 250% on the products of some-, & of up to 282% on those of other-, Chinese solar panel manufacturers (interestingly enough the reason given for the US decision was not that they were "dumping" their products but rather than they "were saturating the market with low-priced solar panels").

⁶ A company then owned by Japan's Sharp Corporation but recently sold to Canadian Solar.

⁷ She is Managing Partner of the California-based DBL Investors venture capital firm & he a graduate student at both the Yale School of Management & of Forest Environmental Studies.

⁸ Disregarding state subsidies (which vary widely but can be quite substantial).

⁹ A much lower number than has been bandied around by other-, incl. Industry-, sources.

the Financial Times and Energy Intelligence Oil and Gas Summit in New York, the EIA had announced it had cut its estimate of California's Monterey Shale oil reserves by 96% (from 13.7BN-, to 600MM bbls-, of "technically recoverable" oil) because, as EIA Administrator Adam Sieminski told reporters, "Not all reserves are created equal ... It just turns out that it's harder to frack that reserve and get it out of the ground." (& this was before the oil price cratered). Reserve estimates are highly sensitive to price levels (that before long may necessitate large reserve value write-downs on oil company balance sheets - thus Houston, Texas-based Apache Oil reported Fourth Quarter "adjusted earnings" of US\$404MM (down from US\$ 631MM YoY) but made the headlines in the local press by also reporting a loss of US\$4.9BN on the quarter on a 'continuing operations, GAAP' basis.

Corporate share buybacks peaked at US\$600BN in 2007, before the Great Recession, only to slump 75% over the next two years & then recover to US\$550BN in 2014. According to Bank of America Merrill Lynch, they could this year go as high as US\$800BN - *buybacks make sense when shares trade below their intrinsic value but corporate treasurers have been buying them like retail investors, i.e. when prices are high, not when they're low. Creating "shareholder value" by using available cash on share buybacks can be a 'short-term gain, long-term pain' proposition when it comes at the expense of needed/desirable capex. Some buybacks have been funded with borrowed money and, while the resultant increased leverage of corporate balance sheets will be a boon in good times, they will be less so in less good ones. And buybacks can have an insidious effect on the stock market; thus recently a 'talking head' intoned "buybacks boost corporate earnings". Nothing is further from the truth; they just reduce the number of shares outstanding, allowing the same absolute amount of earnings to be spread over fewer shares, thereby generating higher earnings per share (EPS). And a higher EPS 'warrants' a higher share price & the seemingly faster EPS growth a higher P/E (Price/Earnings) ratio which in turn also justifies a higher share price. But fundamentally nothing has changed & it is basically all a 'shell game'*¹⁰.

Google's Vint Cerf (age 74), the "co-father of the Internet" (with Bob Kahn), past President of the Association for Computing Machinery, a member of the Board of the Council on CyberSecurity, & still Google's 'Chief Internet Evangelist', recently warned the Annual Meeting of the American Association for the Advancement of Sciences about a possible "Digital Dark Age". For he worries that what we have stored on our computers may be lost to future generations as new computer software is developed; for "backward compatibility is not always guaranteed".

Chrysler, late last year renamed FCA US LLC, is no longer one of the Big Three US automakers; it's now No. 5, having been surpassed by both Toyota & Honda.

The CIBC has long maintained an Employment Quality Index based on the distribution of full-, & part time-, jobs, the gap between self-employment & higher-quality jobs, and whether the jobs are in the low-, medium-, or high-paying sectors. It reported on March 5th that in 2014 it had slipped 1.8 percent, & was down 15% in 20 years, 'a structural issue that could prove hard to reverse'.

The BC government is replacing its century-old water legislation with a new Water Sustainability Act (WSA) that will, for the first time ever start charging industrial users for groundwater withdrawals, albeit at only a fraction of what some other jurisdictions charge; for the Environment Minister proclaimed "proudly" that the Province "has never engaged in the selling

¹⁰ The definition of which is "a confidence trick to perpetrate fraud".

of water as a commodity ... We don't sell water. We charge administration fees for the management of that resource" (the cost of which a departmental spokesman estimated to be \$8MM). So Nestlé, that hitherto got its groundwater for free, is now expected to have to start paying \$596.25 annually for the 265MM litres of water it uses every year, i.e. about \$2.25 per million litres (*part of which then gets sold to consumers in bottled form at \$2, or so, a litre*). *The good news is that the government will start charging at least something, but the bad news that it doesn't seem to appreciate that the world is heading into a water crisis, that water is a resource (& not a "free good"), that pro-active pricing reduces wasteful usage, & that, like elsewhere in Canada, it is making decisions with a scary lack of detailed knowledge as to the groundwater situation.*

When Netanyahu declared, prior to coming to the US to address Congress on March 3rd, "I will speak for all Jews", there was quite a reaction among American Jewry. Sen. Dianne Feinstein (D-Cal) said "It's a rather arrogant statement ... He doesn't speak for me", Rebecca Vilkomerson reminded Washington Post readers that in 2012 69% of US Jewish voters had voted for Obama while in 2013 only 23% of Israeli Jews had voted for Netanyahu, H. A. Goodman said in On the Hill that "To say that one person speaks for an entire ethnicity is an egregious stretch of reason and logic." As he spoke, there was a demonstration outside the Israeli Consulate at 42nd Street & 2nd Avenue in New York City, organized by the Central Rabbinical Congress of the United States & Canada, carrying signs like "Bibi - don't drag American Jewry into your provocative politics." And, in the end, 58 lawmakers, all of them Democrats except for Vermont's Independent Senator Bernie Sanders, deliberately skipped the Netanyahu performance (as did President Obama & Vice-President Biden), although one of them, Sen. Elizabeth Warren (D-Mass.), was quick to point out in the Boston Globe this should not be taken of a sign they did not "strongly support" Israel.

According to the Jewish Virtual Library, a project of the Chevy Chase, Md.-based America-Israeli Cooperative Enterprise, a not-for-profit founded in 1993 "to strengthen the US-Israel Relationship", the ethnic makeup of Israel over the last 80 years evolved as follows :

	1936	1946	1948	2014
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Jews	384 (28.1%)	543 (30.0%)	717 (82.1%)	6,102 (75.2%)
Non-Jews	983	1,267	156	2,488
Total	1,367	1,810	873	8,132

Another source set the number of Jews in Palestine in 1948 at 713,000 & of Arabs at 69,000, (and hence that of the other 'Non-Jews' at 87,000), and the 2014 corresponding numbers for Jews & Arabs at 6.218MM & 1.719MM respectively. So while world's population grew from 2.5BN to 7.2BN (< 3x) between 1948 & 2014, that of Israel's Jewish citizens -, grew 9x & Israel's Arab population 25x. While the differential has been narrowing, because the Jewish fertility rate (*thanks to the not always economically productive Haredi*) has come up (although it's still in non-replacement rate territory), that of the Arabs, while declining, is still well above the replacement rate).

First mooted in 2006 after the Shiites had taken control of Iraq, and more recently given greater urgency by the rise of *the nominally Sunni ISIS* & even more recently further justified by the January attack by ISIS militants on a Saudi border post in which a senior Saudi general & two border guards were killed, Saudi Arabia recently completed the first phase of construction of its Northern Border Security Project, a 600+ mile/1,000 km "Great Wall" on its border with Iraq, from Kuwait to Jordan. Being built by an EADS subsidiary, Airbus Defense and Space, it will

feature a sand berm, a 100 metre wide ditch flanked by 18 foot-high chain link fences topped with razor wire, with a concertina wire fence on-, & movement sensors that would trigger silent alarms in-, the ground between them. It will also include 40 watch towers equipped with Airbus SPEXER radar (capable of detecting a slow moving pedestrian as far as 18 kms/11.2 miles away & vehicle movement up to twice that distance), and day & night cameras, 7 command & control centres, 38 communication towers & 32 military response stations with helipads, all of them connected with each other, & with the Ministry of the Interior, by 1.5MM metres/1.65 MM yds of fibre optic cable, and all of it backed up by 240 rapid response vehicles and 10 mobile recce vehicles equipped with Spexer radar, and video-, thermal-, & nightvision cameras, and a complement of 4,000 troops.

According to official Chinese statistics released on March 1st, in 2014 China's coal consumption declined 2.9%, the first YoY drop this century (contributing to 0.7% lower YoY CO₂ emissions) - *The Institute of Public and Environmental Affairs (IPE), a Beijing-based non-profit NGO¹¹ & the state-owned Securities Times newspaper are now cooperating in compiling, and publishing, listed companies' environmental track records.* And in late February the Ministry of Environmental Protection summoned to Beijing the mayor of the city of Linyi, Shandong Province, & his counterpart of Chengde, Hubei Province, to 'urge' them to crack down on polluting steel mills in their cities, with a Ministry official, Gao Zenning telling channel CCTV "We have to fully implement the law ... to shut down those enterprises which haven't taken any environmental protection measures." - *This corroborates, the message of the item in Gleanings 604 entitled "THE FILM ..."*

According to a local police officer, Rakesh Kumar, on March 4th in Rasoolabad village near the industrial town of Kanpur in Northern Uttar Pradesh, a bride walked out of an *arranged* wedding ceremony when the groom, when asked, told her that 15 + 7 equaled 17, saying that his family had misled hers about his level of education. And her father supported her decision by saying that "Even a first grader can answer that."

In Bangladesh Prime Minister Sheikh Hasina's government's 'crack down' on Islamists is applauded by some pro-democracy anti-Islamists but criticized by others as "creeping authoritarianism", in part because it has led to the main (*Islamist*) opposition party being frozen out of Parliament (according to the London-based Indian journalist Salil Tripathy, who writes on Bangladeshi affairs, "Bangladesh is becoming a land where assassins feel emboldened ... and writers are forced to watch what they speak, keeping their thoughts imprisoned in their minds.") - *and as if to prove this, on February 26th Avijit Roy, age 42, a well-known Bangladeshi American writer & blogger, and religious sceptic, resident in the US but in Bangladesh to attend a book fair, was hacked to death with cleavers, & his wife seriously injured, on a Dhaka street in the university area, right in front of a police barricade set up to protect the event, by members of a previously unknown group calling itself Anstar Bangla 7 for his "crimes against Islam" (a Hindu turned 'scientific atheist', he had questioned the credibility of the Koran & likened all religion to "a virus").*

GLEANINGS II - 607SP
Monday March 30th, 2015

¹¹ Founded in 2006, it's still run by Ma Jun (age 47), a prominent, world class environmentalist, who from 1993 to 2000 worked as a journalist at the South China Morning Post (& in 1999 published a book, *China's Water Crisis*, China's first-ever major work on the subject, who is a regular at the Davos Economic Forum & in 2012 received the Goldman Environmental Prize.

CLIMATE CHANGE CONSENSUS IS REACHED EVERYWHERE EXCEPT IN WASHINGTON (G&M, Elizabeth Renzetti)

- Recently Sen. James Imhofe (R.- Okla.) denounced those who say Man is the cause of (*or is contributing to?*) climate change, thundering “Climate has always changed. There is archeological evidence of that. There is biblical evidence of that. There is historical evidence of that. The hoax is that there are some people who are so arrogant to think that they are so powerful they can change the climate. Man can’t change climate.”¹². The scary part is that he is now again (as in 2003-2007) Chairman of the Senate’s Sub Committee on the Environment and Public Works & is promising to challenge the scientists’ consensus, telling the Senate last January 21st “We’ll be there to be the truth squad.” And he will get help from Sen. Ted Cruz (R.-Texas), now head of the Committee overseeing NASA, who has promised to ensure it moves away from “political distractions”, such as gathering climate data, to focus on finding out more about Mars, & Sen. Marco Rubio (R- Fla.), who now heads the Committee overseeing NOAA (National Oceanic & Atmospheric Administration) - *by the way, NASA & NOAA recently reported 2014 was the hottest year on record & that 14 of the 15 warmest years (on record?) have occurred since 2000.*

But Sens. Cruz & Rubio are 2016 Republican Presidential hopefuls & a recent poll of 1006 people conducted by the NYT, Stanford U. & the non-partisan environmental research group Resources for Tomorrow between January 6th & 22nd, found that, with a margin of error of 4.6%, while it wasn't their top issue, an overwhelming majority of Americans (incl. half the Republicans) support government action on climate change & would be less likely to vote for candidates who denied, or questioned, the scientific evidence piling up that it is for real. And Sen. Inhofe is an 80 year-old ‘Environmental Neanderthal’ who has spent the past 23 years with both feet in the Congressional trough & whose last real job was the inherited Presidency of the Quaker Life Insurance Company that on his watch went into receivership in 1986 (with stockholders, a Tulsa bank & the FDIC alleging mismanagement). Be that as it may, a geopolitical game changer may be in the making. For over the years whenever emission cuts were proposed they ran into opposition from developing countries, with China & India in the van, claiming cuts would impede their economic progress. But Beijing is now feeling growing grass roots pressure to improve air quality (& in India ‘green shoots’ of a similar nature may be starting to emerge) & has started to give the environment a much higher priority. This in due course will force the hand of the environmental ‘knuckle draggers’ (who are still out there; thus Reuters reported that after Rick Scott became governor of Florida in 2010, despite having disputed that Man contributed to global warming, verbal instructions were issued to employees of the Florida Department of Environmental Protection to quit using the terms “climate change”, “global warming” & “sustainability”.

U.S. AUTO RECALLS HIT 63.95 MILLION IN 2014 (Detroit News, David Shepardson)

- The National Highway Traffic Safety Association reported on February 12th that automakers in 2014 had recalled 63.95MM vehicles in 803 programmes, over twice the previous year’s 30.80MM post-2004 record, in part because GM had to recall 27MM

¹² He apparently bases his belief, in part at least, on Genesis 8 : 22 (“While the earth remaineth, seedtime and harvest, and cold and heat, and summer and winter, and day and night shall not cease” - which seems like rather a stretch.

vehicles in 81 programs. Air bags accounted for 21MM (largely due to deficient products made by Japan's Takata), electrical systems for 20.2MM & power train issues for just 3.9MM.

So in 2014 20+% of all vehicles on US highways & byways had been subject to a recall.

UBER IS RESEARCHING DRIVERLESS CARS (Huffington Post)

- On February 2nd Pittsburgh, Penn.-based Carnegie-Mellon University & Uber announced a strategic partnership for the development of driverless cars that will see Uber fund faculty chairs & graduate fellowships at the university's Robotics Institute (that for years has been working on driverless cars). CMU had partnered with Google since 2006, & the following year won a US\$2MM prize by helping GM to develop a driverless SUV that won a 60-mile race sponsored by the Defense Advanced Research Projects Agency, until it poached a top Carnegie-Mellon robotics specialist to develop its own self-driving car project.
- Adam Jones, a Morgan Stanley automotive analyst, predicted in a note to clients last year that in 15 to 20 years Uber¹³ could develop a fleet of autonomous taxis that would eliminate the need for personal car ownership , thereby disrupting the auto industry's business model.
- Uber already operates in Pittsburgh, Penn. & Harrisburg, Penn., & recently the State's Public Utilities Commission granted it a two-year experimental license to operate anywhere in the state except Philadelphia (although it has operated there & continues to do so).

According to Uber driverless taxis would cut the cost of taxis by 75%; for as CEO Travis Kalanick puts it, traditional taxis are expensive since "you're paying for the other dude in the car"; his company's cost comparison puts the annual operating cost of a driverless taxi at US\$9,200, vs US\$53,500 for one with a driver, with most of the difference accounted for by "the other dude".

THE INCREDIBLE SHRINKING RETAIL SECTOR (G&M, Barrie McKenna)

- Hundreds of stores are being shuttered, tens of millions square feet of retail space are vacant, & venerable old names are vanishing. More & more products are moving online, increasing competition for the bricks-and- mortar retail outlets, the *suburban* big box store era has peaked as city dwellers move downtown, the Baby Boomers are shedding possessions, and big suburban homes are out & condos in. Combined with sluggish wage-, & job-, growth & high debt loads, this has created a perfect storm for retail. And it is a sign of the times that more & more retailers, first & foremost Wal-Mart, and in Canada the now Loblaws-owned Shoppers Drug Mart, are devoting more floor space to food (a 'need'-, rather than a 'want'-, good). While physical locations still have a role to play, retailers are becoming more strategic in their use, especially where rents are high.

The one thing that's usually overlooked when going gaga over the growth of online sales is that the stats are gross-, rather than net-, numbers (i.e. they don't take into account returns, that apparently can be quite substantial since consumers have become a great deal more discriminating since the days of the Sears'-, & Eaton's-, catalogues.

¹³ And a betting person could lay odds that moment will come much sooner.

SAUDI ARABIA RELIGIOUS POLICE OUTLAWS COLOURFUL ABAYAS (DT, R. Spencer)

- Abayas are the all-enveloping, shapeless vestments Saudi women are required by law to wear in public. While traditionally, to paraphrase Henry Ford ‘they could choose any colour, provided it was black’, in recent years Saudi women have begun to experiment with other colours, such as brown or navy-blue. But shortly after the death of King Abdullah, who had spent years trying to rein in the Mutawa, the feared religious police, its officers started raiding stores selling abayas & tearing down any that were not black. This is attributed to the growing influence of former Interior Minister, & now Deputy Crown Prince, Prince Mohammed bin Nayef (age 55), who in the past four years oversaw a ferocious campaign against dissidents to prevent a contagious spread of the Arab Spring to the Kingdom.

His position will now likely be strengthened by recent events in Yemen; for he has been warning for years about the risk to the Kingdom of Yemen becoming a ‘failed state’.

A NEW CAPITAL IN THE DESERT (WP, Ishaan Taroor)

- At the March 13th weekend economic summit at the Sharm El-Sheikhseaside resort which produced US\$12BN in investment pledges by Persian Gulf states, the Housing Minister in regime of Egypt’s President (& former Field Marshall) Abdel Fattah el-Sissi, announced plans for a new capital city, yet to be named, in the desert to the East of Cairo. To be built in partnership with a developer from the UAE, it would cost US\$45BN-, & take seven years-, to build, sprawl over 390 square kilometres, in due course be home to 7MM people (vs. Cairo’s current 18MM), & feature a theme park “four times bigger than Disneyland”.
- But some Egyptians aren’t impressed. One is Khaled Fahmy who, *with an undergraduate degree in Economics & a Master’s in Political Science from AUC (the American University in Cairo), a D.Phil. from Oxford, & a Fullbright in his CV*, now teaches at AUC, *after a sojourn at NYU as Associate Professor of Middle Eastern & Islamic Studies (where he also participated in its Cities and Urban Knowledge Project at its International Center for Advanced Studies)*. For he wrote on Facebook “We, Cairenes and Egyptians, were not informed, let alone consulted, about this move” & then went on to say the vast amounts of money to be lavished on this project should instead be used to “improve the living standards of Cairenes and Egyptians who, at best, are dealt with as second class citizens in their own country.” And David Sims, a Cairo-based urban planning expert, observed “The scale is huge, and there are questions like : how are you going to do the infrastructure? How are you going to get water?¹⁴ How will they move all those ministries? ... I think it’s just desperation. It will be interesting to see if anything comes of it, but I rather doubt it.”

Plans are easy to announce & equally easy to let fall by the wayside, just like pledges (just ask UNRWA about the latter; for it was recently forced to suspend funding reconstruction in Gaza because of the US\$5BN pledged by various countries, not a single bloody penny in cold, hard cash had as yet been received or, for that matter, ask the people at Toronto’s ROM (Royal Ontario Museum) who, according to a two-page feature in the March 28th Globe and Mail, are still waiting, ten years after the fact, for \$23MM in pledges to materialize).

¹⁴

Which in an era of a looming global water crisis may well be a critical one.

SEVERE CLIMATE CHANGE ONE FACTOR IN SYRIAN REVOLUTION

(Torstar News Service)

- This claim is put forth in a study emanating from the University of California, Santa Barbara published on March 2nd in Proceedings of the National Academy of Sciences. Researchers say a multi-year drought, the worst ever recorded in the region, wrecked the breadbasket of Northern Syria, forcing farm families to flee to cities in which poverty & mismanagement by the Assad regime was rampant. And, coming on the heels of the arrival of 1.5+MM Iraqi refugees, this had caused Syria's urban population to grow 50% in just eight years. While there have always been periodic, & sometimes severe droughts in the "Fertile Crescent" (that covers parts of Turkey, Syria & Iraq), average temperatures have risen there by over one degree-, & average wet-season precipitation declined 10%- in the past century.

But Colin Kelley, a climatologist at the university warns "We are not saying that climate change caused the revolution ... (but) that this multi-year drought was made more severe due to this long-term trend and ... led to this chain of events" - this may well be a harbinger of things to come; for many regions in the world are already water-challenged and, if changing weather patterns were to adversely affect local rainfall, may become increasingly unable to sustain their growing populations, at which point those living in the better-off regions will have two choices : share & make it possible for them to survive where they are (which many would prefer), or have them come & visit.

CHINA'S INTEREST IN ISLANDS A 'SHORE' THING (China Daily)

- On March 3rd, at 10:00 a.m . local time, four islands, in Fiji, Greece, the UK & Canada, were put up for auction on China's largest online shopping platform, Taobao, and by 10:00 p.m. all but the UK one were sold. Any Chinese citizen who put up a 159 yuan (US\$25) deposit could bid, the starting bid price for all but the UK one (where it was 4MM yuan) was 1 yuan, & a total of 48 bidders participated. The Greek island (off the shore of Turkey) brought 6.2MM yuan, the one off the west coast of Fiji (that only provided for 99-year property rights whereas the other three were freehold) for 5MM yuan, & the one off Nova Scotia's southeast shore went for 1.7MM yuan (\$340,000) to a construction magnate from Yunnan Province (in China's deep Southwest, bordering Myanmar & Laos).

Meanwhile, according to the March 5th National Post, after Canada & China in 2013 signed an agreement to split all assets recovered connected to corruption, Chinese police in the past year have run a secret operation in BC, "Operation Fox Hunt", to hunt down allegedly corrupt Chinese, & laundered money generally - Canada, the US & Australia are the destinations of choice for such people & their ill-begotten gains, and there have long been allegations that the (very expensive) Vancouver real estate market has been floating on an ocean of laundered money. But since Canada & China have no extradition treaty, this raises a question as to how the Chinese police proposes to deal with any bad guys it locates (not likely prettily & in accordance with Canadian law?).

FAKE NUMBERS IN CHINA START AT LOCAL LEVEL (EPOCH News, Lu Chen)

- A February 14th report by Xinhua said that local governments have turned industrial output numbers into "figures games". A random selection of 39 industrial companies in

Hengshan County, Hunan Province for the recently completed Third Chinese National Economic Census found that, while their combined output in 2013 had been reported to have been 4.4BN yuan (C\$870MM), inspections showed it had actually been only 580MM yuan, and that, while another five enterprises in the Provincial capital Changsha had claimed output of 280MM yuan, in reality it had been just 3.4MM yuan. And an unnamed official in Hengshan County told Xinhua that county governments routinely over-report data because officials who don't want to draw negative attention & criticism from higher-ups, thereby affecting their political records & opportunities for promotion.

Official Chinese data have long been suspected of being, let's say, not very reliable, and it's interesting to see this now confirmed from official sources, although it is not entirely clear what the powers-that-be expect to gain from doing so at this time.

CHINA'S ECONOMIC NUMBERS PAINT A FRIGHTENING PICTURE (Epoch Times, Fan Yu)

- London-based Lombard Street Research has been crunching China's economic numbers for over a decade. Its best estimate is that China's Fourth Quarter 2014 annualized GDP growth rate was 1.7% (vs. the official 7.3%), & that for the year as a whole it had been 4.4%, 40% below the official number. And its Diana Choyleva wrote in a Note to Clients "China is beset by the largest capital outflows on record, which are tightening domestic monetary conditions ... It is clear that Beijing will need to support the economy if it is to avoid a dangerous collapse." And elsewhere, in a February report on global debt, McKinsey & Co. estimated that between 2007 & mid-2014 total debt outstanding in the Chinese economy had quadrupled to the equivalent of US\$28TR, 282% of its official GDP (*which if the item immediately above is correct, could be an overstatement*).

McKinsey also said total global debt during the period grew from US\$57TR to nearly US\$200TR, i.e. much faster than global economic growth, that the "higher levels of debt pose questions about financial stability", and that the high levels of household debt are creating "potential vulnerabilities in ... the Netherlands, South Korea, Canada, Sweden, Australia, Malaysia and Thailand". But also that "the one bright spot" in the whole picture was that the banks have been deleveraging, most prominently so in the US & a few other crisis-hit countries, while having stabilized in others.

NOTE : Epoch Times is the voice of the Falun Gong; so there's no love lost between it & the powers that be in China. Just the same, & perhaps because of that, it frequently comes up with interesting insights & in this case did simply report what the noted sources had to say.

WORLD'S LONGEST TRAIN JOURNEY ENDS IN MADRID (The Telegraph, H. Alexander)

- On December 8th a train arrived in Madrid that had started its journey 20 days earlier & 8,000 miles away in Yiwu, Zhejiang Province, just South of Shanghai, having traveled there via Kazakhstan, Russia, Belarus, Poland, Germany & France with the 40 shipping containers it carried having to be transferred (because of difference in the rail track gauges¹⁵) on different wagons on three separate occasions (at the Chinese-Kazakhstan-, the Belarus-Poland-, and finally the French-Spanish-, borders). On the inbound journey the train carried children's toys & cutting tools and on the outbound journey it was to

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While the 'standard gauge' is 1.43 metres/four feet, 8½ inches, there are 20 others in use.

carry wine, olive oil & cured ham. According to Li Qiang, the governor of Zhejiang Province, this trial journey was important to “implement the strategy of a new Silk Road”. While rail service already operating between China & Germany, from Chongqing to Duisburg and from Beijing to Hamburg, it is hoped that this will significantly increase trade between China & Europe, most of which currently goes by sea.

While more expensive, the train mode of moving goods between the two countries is also much faster; thus moving goods from Shanghai to Hamburg by sea takes a minimum of 31 days (although that would likely be shortened significantly if & when the trans-Polar route becomes a reality).

CARDINAL APPOINTED BY POPE FRANCIS TO REFORM VATICAN BUDGET ACCUSED OF MASSIVE OVERSPENDING (The Telegraph, Nick Squires)

- *In February 2014, as he embarked on sweeping reforms of the Vatican's finances, Pope Francis created the Secretariat of the Economy to promote more accountability & transparency, and a month later appointed Cardinal George Pell, the Archbishop of Sydney, Australia to be its first Cardinal-Prefect. In the last week of February a document was leaked saying that during the six months ended last January he had spent 501,000 Euros on first class plane tickets, ceremonial clothing, wall paper, tapestries & furniture, incl. one 4,600 Euro designer kitchen unit (that his detractors claim had caused the Pope to ask “What is it made of, gold?”). The Vatican condemned the leaking & its spokesman said the Secretariat was “carrying out its work with continuity & efficacy.”*

The leak transmitter was L'Espresso, one of Italy's leading two news magazines (the other, Panorama, has a 50% greater circulation & is owned by Berlusconi), with a long record of investigative reporting. Some of the itemized details, however, seem picayune. While the article claims he was “long known to have to have expensive tastes”, it cannot be where food is concerned, for he does not have the porcine jowls of some senior churchmen. And this assumes the Pope had been witless enough to pick someone vulnerable because of his “expensive tastes” to clean up the Vatican's financial Augean stables & step on many influential toes in the process (who is said to have already unearthed hundreds of thousands of Euros in hidden Vatican bank accounts). And it seems hardly a coincidence that the leak surfaced in the very week he had formally required the heads of all Vatican departments “to certify in writing that they had provided complete and accurate (financial) information”. Aged 73, Cardinal Pell, an ex-rugby player with a large physique, has a heart condition & a stressful job; so it is not entirely surprising he doesn't travel in steerage. And according to Damian Thompson of The Spectator “Last time I saw him, he was dressed like a priest, not a cardinal, in a battered suit and ... cheap, comfy shoes, and did not want to waste money on a taxi when he could take a brisk ... 30-minute walk across the city” (so he appears to be cut of the same frugal cloth as the Pope who lives in a modest apartment rather than the Pontifical palace). Finally, the Secretariat's rebuttal to these charges read in part : “Since March 14, 2014, when the Secretariat was initiated, the operational costs of the Secretariat, which included some initial start-up costs, were in fact below the budget set when the office was established ... The Secretariat currently has twelve staff working on implementing new financial management routines to improve transparency and accountability ... The Secretariat will shortly present the Council for the Economy the Audited Financial Statements for 2014. This will include a detailed account of all Vatican entities, including the Secretariat's.” (which, however, will not yet reflect the new routines, which did not come into effect until last January 1st).

SOUTH AFRICA IGNORES ADVISERS OVER \$85 BILLION NUCLEAR PLAN

(BB, Paul Burkhardt)

- South Africa's ageing coal-fueled power plants of state-owned Eskom Holdings SOC Ltd., the supplier of 95% of its electricity¹⁶, cannot keep up with the demand for electricity, prompting rolling blackouts that have led to cutbacks in industrial output & to a US\$7.8BN sell-off of its currency & bonds in the nine days to February 13th, and to the Rand on February 11th hitting a 13-year low against the US dollar. So in his annual state-of-the-nation address on February 12th President Jacob Zuma announced his government was going ahead with spending US\$85BN on new nuclear power plants with bids being sought from US, Chinese, French, Russian & South Korean suppliers¹⁷ to add 9,600 MW of power to the national grid starting in 2023, telling the press the next day after a speech in Capetown "We know exactly what we need ... we are now well-informed. We are moving ahead."
- But in so doing President Zuma is ignoring objections from environmental activists, opposition parties & labour unions, and even his own advisers who say the plants are too costly & would take too long to build. And the National Development Plan, the government's own blue print for the economy, recommended that alternatives to *nuclear power* that would be easier to fund should be investigated, with Prof. Anton of the University of Capetown's Graduate School of Business, & a member of the National Planning Commission that had drawn up the Plan, saying "Nuclear is not a wise choice for South Africa ... Nuclear power will not enable us to resolve our immediate power crisis. It is more expensive than other options and international experience shows that nuclear projects are prone to cost and time overruns". A December 2013 20-year plan by the Energy Ministry¹⁸ had recommended any decision on nuclear power be delayed until at least 2025 to allow a proper assessment of alternatives & the likely demand for electricity. The National Union of Miners, an ally of the ruling ANC, says that nuclear power isn't a priority & that the emphasis should be on completing the two coal-fired power stations under construction that are behind schedule. And, as President Zuma himself had noted in the context of the switch from coal to renewable resources, three rounds of bidding has *earlier* raised 140BN Rand (US\$12BN) from private sources to fund 3,900MW of renewable energy, with 32 projects with a capacity of 1,500MW already connected to the power grid.

When Zuma said "We know exactly what we need", he may have been referring to the need to line his pockets & those of his cronies. For the cost estimate is out of whack with those in an 2010 EIA report entitled Capital Cost Estimates for Electricity Generating Plants that sets the cost of building a nuclear power plant at US\$5,339/KW (i.e. US\$50BN for Zuma's

¹⁶ That also owns & operates the country's only nuclear power plant in Koeberg, Western Cape Province, that came on stream in 1984 (& thus is likely in its second half life).

¹⁷ Although the next day, on November 13th, the Johannesburg-based Mail & Guardian newspaper reported, citing a copy of a hitherto secret agreement it had obtained & verified, that Energy Minister Tina Joemat-Petterson had *last year* signed a 20-year agreement with Russia's Rosatom giving it a veto over South Africa doing business with any other nuclear vendor.

¹⁸ I.e. five months before Tina Joemat-Petterson had become its Minister.

program¹⁹). Nuclear power plants are unusually complicated facilities to build; even in China & South Korea it takes as much as 6 years to do so (& at least two more years longer in Europe & North America), over & above the two years it typically takes to plan them), whereas a 50MW wind power farm can be built, at a much lower up-front cost & with a shorter payback period (a major consideration in an emerging economy) in less than a year. South Africa's current power generating capacity is in the 46,000MW range (of which coal accounts for 85%, gas for 5.3%, hydro for 4.7%, nuclear for 3.9%, wind for 1.3% & solar for 0.2%)²⁰, with another 12,000+MW (78%, -, 10.8%, -, 5.6% & 4.5%) under construction, with the country estimated to have a 29,000MW wind-, & with 2,500 hrs of sunshine annually (as much as Spain) a 548,000MW solar-, power potential.

¹⁹ And South Africa's cost structure should be lower, not just because of its lower labour costs but because the EIA number includes an allowance for the likely much higher cost of getting regulatory-, & environmental impact assessment-, approval.

²⁰ Numbers do not add due to rounding.