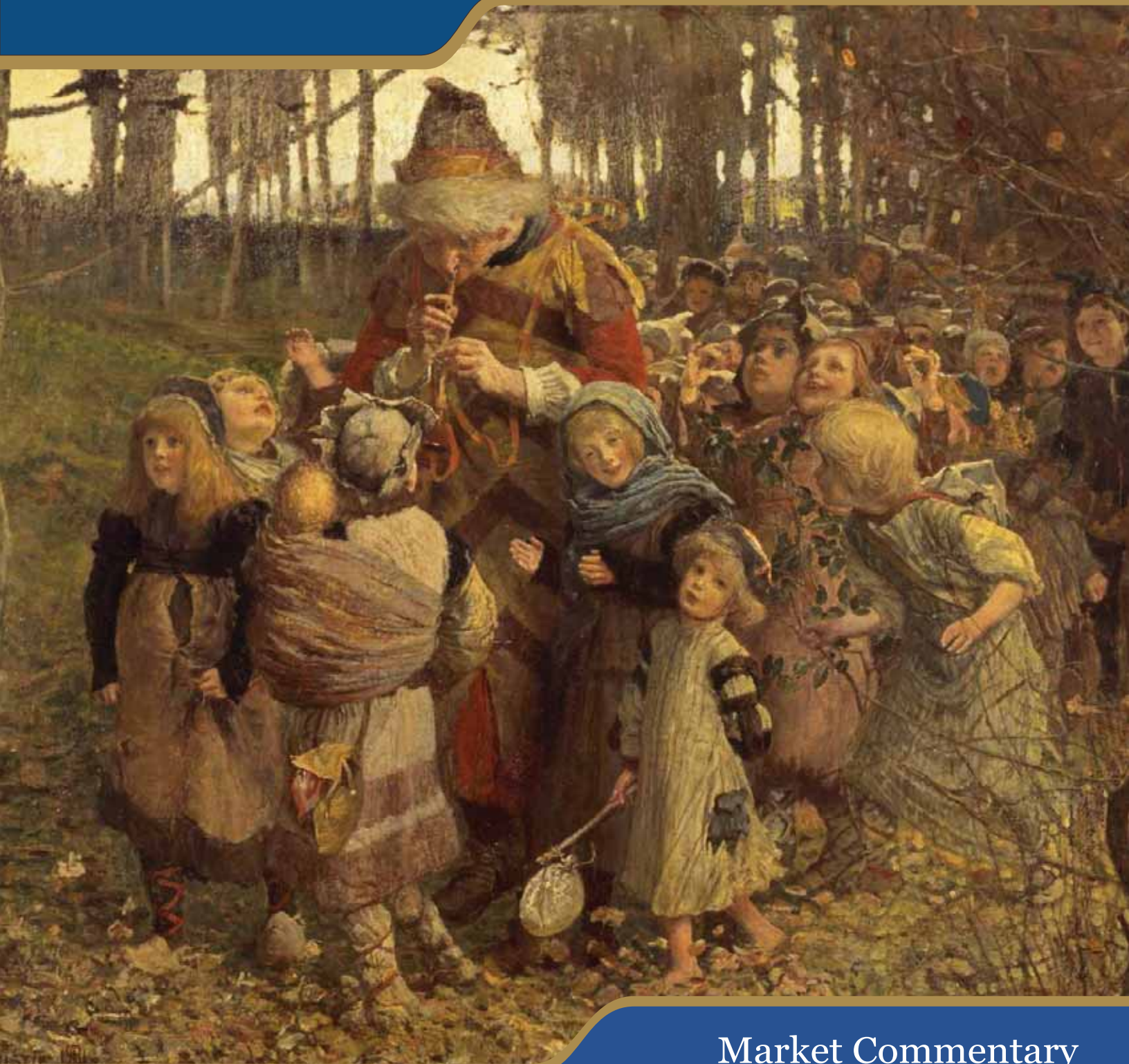




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Market Commentary
April 2025



Executive Summary

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The Trump administration is trying to broadly restructure the United States both internally and externally. For reasons noted in detail below, we are skeptical about the outcomes of this program. We are revising our investment advice in a more cautious direction accordingly.



Domestic Politics

Trump's major agenda items: cost cutting, deportations, tariffs and assaults on labeled enemies remain the central focus.

The primary goals of cost cutting are to permanently reduce the scope of the Federal government, to fund a renewal of the 2017 tax cuts and to club enemies. Musk remains central to this effort. His recent retweet of the comment that "Hitler, Stalin and Mao Tse-Tung did not kill millions of people, it was their civil servants who did so" adequately captures the spirit in which revision of the Federal civil service is being approached. Musk's persistence in channeling Dr Strangelove is bound to raise concerns about so eccentric an adviser in the President's inner circle and thus in near propinquity to the nuclear button in the case of a crisis. More directly, Musk's activities have come under heavy fire from the American Enterprise Institute, a think tank closely associated to the US's corporate leadership. The AEI

describes the activities of Musk as amateurish, incompetent and unlikely to achieve lasting reforms.

Congress gave itself six months to figure out how to fund the tax cuts. It passed a continuing resolution which continues the existing budget with essentially no policy changes. As such, of course, it directly contradicts Trump's effort to shutter major programs. The main casualty of this step, however, was the Democratic leadership which reluctantly embraced stability against a rank and file demand for burned fields opposition. In truth the Democrats currently are doing a fair imitation of Kerensky confronting Lenin. We regard this as normal pendulum politics. The Republicans spent six months after their 2020 defeat in passionate discussions of Mr Potato Head before coalescing behind their current program.

Deportations are highly publicized and quite controversial. Deportations are currently at the 10,000/100,000 level but Trump aims for a tenfold increase. Each 1 million persons deported produces a 0.1% direct decrease in GDP and probably another 0.1% indirect decrease. With a GDP growth rate of about 2.0% these numbers are significant reductions in growth. Trump claims the deported are occupying jobs which should go to Americans. With the country virtually at full employment we are unsure where the Americans are going to come from. Moving civil servants to fill the manual labor minimum wage jobs held by migrants is a government program for accelerating downward social mobility. The state of Florida has an alternate solution. It is considering reducing the restrictions on child labor to fill the low end jobs. Historically educating themselves has been regarded as the primary agenda for children and for that to happen they must be awake during school hours. Accordingly, current labor laws (dating to the Victorian era) ban children from late night shifts. This ban also keeps a more vulnerable population from circulating at late night when policing is more challenging. Florida's proposal is to allow teens 14 and older to work night shifts.

The administration has gotten into a fight with a senior Federal judge over the deportation program. The administration apparently defied the judge's injunction to

pause a deportation program pending judicial review. The administration probably assessed that flying members of a Venezuelan mafia off to prison in El Salvador would pass muster with the public. However their application of a law specific to the President's war powers is a red flag for the judiciary and a personally disrespectful tone to the Federal judge with the highest experience level in handling immigration matters will sit badly with his colleagues. The administration seems to sense they made a misstep and an effort is underway to cover up what actually happened and by whose authority. So far there has been no suggestion the Pentagon was involved in this alleged application of a war power. That to our mind is a troubling circumstance in itself. Trump is eager to involve the Pentagon directly in deportations, but doing so directly contradicts the Posse Comitatus Act which has long been a Republican sacred cow.

On tariffs Trump seems incapable of making up his mind. Heavy tariffs are announced one day. They are greeted with public protest, announcement of foreign counter tariffs and falling stock markets.

They are then withdrawn for reconsideration and pushed out again a week or two later to repeat the cycle of dithering. For instance Trump announced he was going to triple the price of French wines and champagnes and this would be a great thing for California wineries. Republican voters paused to wonder why their wallets should be vacuumed out for the benefit of California's wine industry. This was not the pressing public necessity for which they had elected Trump. The California wine industry itself saw limited ability to increase volume in the near term with its vines still in recovery mode from wild fires and its labor force busy hiding from ICE agents. But it saw substantial disruption to its distribution network and a long term threat to its growth from counter-tariffs. In fact many California wineries make redistribution deals with European producers so as to offer more rounded product lines to wholesalers.

Businessmen naturally optimize their systems to the prevailing environment. Political interventions to change the environment always cause near term losses and only randomly produce offsetting long term gains. As a result the

strong preference in the business community is for the government to make no changes. However, the Trump Republican party is eager to make changes, allegedly in the name of the working class, at least until fund raising is the issue of the day. We think the business community is going to grow increasingly distressed by the administration.

Turning to political warfare, the largest current target of the administration is education. The current objective is to close the Education department, which is the smallest of the cabinet departments (about 0.16% of the total civil service.) The department has four activities: running the student loan program, making grants to local school districts, making college scholarship grants and auditing these programs. In short it is a grant making operation and not an operator of schools or a setter of educational standards. Control over content and delivery of education is firmly in local hands. Nevertheless the department is a long time favorite target in Republican circles. To quote the attorney general Pam Bondi “the experiment in using federal funds to control education is over.” But no one is suggesting that outstanding student loans be forgiven, so the need to administer them remains. Similarly a plan to specifically cut off scholarships for needy high achievers goes against traditional bipartisan values of rewarding accomplishment, hard work and personal uplift. And the largest beneficiaries of federal funds are red states who are trying to move their kids into the knowledge economy to compete effectively with blue states which are a generation further down the road of supporting the virtuous circle of education-high tech industry-growing economy-funds for education. So the actual plan is simply to dismember the department and parcel its activities out among other departments. What compelling national gain this bureaucratic shuffle is supposed to deliver is not very clearly articulated.

While supposedly setting local school districts free from the shackles of Federal funds, the administration is coercing private universities by cutting off funding. It is attempting to push through changes in curriculum, in student life, in on campus political debate and in scholarship. Specifically, it wants universities to end any discussion of the Middle East which is critical of Zionist positions, causes distress to Jewish

students or tolerates advocacy of Palestinian positions or causes. We think the public is with the administration on this one, but the hypocrisy in the government's position does not argue for stable long term policy making. We are also concerned about the disruption being done to the nation's research effort. Musk's cost cutting has caused John Hopkins to terminate thousands of workers in health research. Cuts of hundreds of millions in support to individual institutions will force through dramatic reductions in programs with damage to both training and research. We feel the administration is blindly hitting out at a critical nerve center of the US economy - basically in the interests of a foreign power.

In more petty political warfare, the administration continues to exceed expectations. The government's broadcast service, Voice of America, is to be shut because Trump did not like their news coverage of himself. VOA's actual job is to counter balance Russia/Chinese/Iranian propaganda with the balanced journalistic coverage which is the hallmark of a free society. We are not sure why presidents should be empowered to destroy national assets because they dislike their press coverage.

The president's cultural agenda extends far beyond VOA however. He also wants to shut NPR and PBS. He is directing the Smithsonian to revise its displays. In short, the President wishes to articulate a national ideology and shut down any views not judged in accord with that ideology. We think this effort will ultimately fail. By in large Americans do not like politicians and will prefer them to stay in their lane rather than broaden out into minding other people's business. It may take some time to form, but we can imagine a groundswell of public frustration forming against the current administration and bringing about a new reality.

So the Trump administration is busy. Busy making enemies out of former well wishers. Busy throwing complex systems into confusion. Busy doing economic damage of uncertain magnitude and duration. Marked difference in policy vision and in spending priorities are important characteristics of the Trump administration. These are routine political differences which are not inherently concerning. But it seems to us that an additional and key source of the turmoil is the misapplication of corporate management thinking to a very

different entity from a private corporation. Private corporations, after all, do not plan on replacing their CEO every 4 or 8 years by his main competitive rival. But that is how democratic governments are designed to operate. Indeed they replace not just the CEO but the entire executive management team. Central to making such a system operate is a degree of self restraint on the CEO's part. It is precisely in the absence of that self restraint that Trump most egregiously departs from democratic norms. We remain skeptical of lasting long term benefits emerging from this chaotic scene. Biden and Trump offer contrasting studies in management styles. We think it is destined to become a classic case study in analyses of what works and does not work in managing a government.



International Politics

A friend of the president's, Steve Witkoff, is emerging as the US's principal negotiator with Russia. Witkoff's background in New York City real estate development has seemingly done little to prepare him for the role. As the administration opened the negotiations by conceding all of Russia's asks, Witkoff's actual job may simply be to settle what fee will be collected for this accommodation of Russia's desires. Presumably no professional diplomat wanted that particular assignment. We doubt also that negotiations in which one side begins by announcing that it has no skin in the game will actually settle any important questions.

In mid-March Russia succeeded in recapturing the 800 square miles of its Kursk province which Ukraine had occupied. This success deprived Ukraine of its most valuable bargaining chip. The US think tank Institute For the Study of War assesses that the Russians took several weeks to prepare for their assault and then struck the moment that the US shut off the intelligence feeds it had been providing to Ukraine. In the ISW assessment this indicates coordination between the US and Russia. The Russians may have

furthered Ukrainian confusion by disguising themselves with Ukrainian insignia – a violation of the law of war constituting a form of perfidy. So its good to know the perfidy was not all on the US side.

Documents have come to light which show that the abduction of Ukrainian children was a primary Russian war aim from the start. Preparations for this abduction program commenced before the invasion. According to the Russian minister who heads the program to date about 700,000 children have been subjected to the program. Any discussion of future relations between these countries must acknowledge the level of mutual hatred now existing on both sides. We are skeptical that Witkoff's efforts can address this situation. We also think Trump's policy of accommodating Putin could ultimately be a very tough sell with his core constituency which is significantly family oriented.

Russia has made its objectives clear. It is seeking control of Belarus and Ukraine to provide bases from which it can project power into Central Europe and the Balkans. That after all has been Russia's steady foreign policy aim for several centuries. NATO faces what will likely be a 20 to 40 year military confrontation across an armed border. The only sensible policy for NATO is to decide what border it can hold at least cost and then impose it on the Russians. In our estimation that border would move Belarus, Ukraine and Kaliningrad into the European sphere and return Russia to its 1998 border. With its entire army pinned down in the Ukraine and materially exhausted, Russia is actually in no position to resist a NATO diktat. The active duty military strength of NATO ex the United States is about 2 million troops – more than twice Russia's strength. However the leadership required to impose such a settlement seems entirely lacking on the NATO side. NATO does not need a Churchill or De Gaulle at this juncture. An Anthony Eden would be quite sufficient.

Israel has allowed the ceasefire with Hamas to collapse, seems to be allowing the ceasefire with Hezbollah to collapse, has moved to occupy the Syrian province at the foot of the Golan heights and is allowing so many settlements in the West Bank that the Palestinians there fear a move to outright

annexation. In short Israel is taking an aggressive stance on every border and is shifting from legitimate defense to territorial expansion. In Gaza specifically it is implementing Trump's idea of removing the Palestinians by cutting off food and offering the Gazans "voluntary rendition" to third countries. With the Trump administration feeding the ambitions of Israel's ultranationalists, we do not think Netanyahu has much capacity to follow a more temperate strategy. However, the current policy direction seems incompatible with improving relations with the Gulf states, Saudi Arabia, Egypt or Jordan. Ultimately that involves the sacrifice of much better economic opportunities than the territories prized by the Israeli nationalists can provide.

China is not exactly keeping quiet. Its naval flotilla dispatched to the Tasman sea has completed a circumnavigation of Australia. China executed four Canadians for drug offenses. Its efforts to destabilize Taiwan are ongoing. But comparatively speaking it is lowering its profile. We believe that it is taking Napoleon's advice "when your enemy is making a mistake do not get in the way."

The Houthis have resumed their attacks on shipping in response to Israel's renewed war making.

The Vice President, Secretary of Defense and National Security Adviser had a conversation on sending the carrier Harry Truman to attack the Houthis. They accidentally looped a journalist at the Atlantic Monthly into this call. After the attack, the call transcript made its way to the public. An interesting revelation was that the officials saw themselves as doing a favor for the Europeans who they roundly despised. The Vice President remarked that he would bill the Europeans for the operation. It is a novel idea to think that the US Navy is being rented out for missions. It is not so long ago that "renting out the Lincoln bedroom" was controversial. Evidently standards have shifted. The officials in question probably are unaware that the US picked up the anti-Houthi mission as a consequence of Eisenhower's policy making in 1956. That was, after all, eighteen years before the eldest of the three was born.

Commenting on this incident, James Carville, eminence grise of Democratic political operators, remarked “do you expect stupid people to stop doing stupid things.” We feel Carville has seen a good deal of bipartisan stupidity in his time and we tend to agree with him that this fiasco is probably just the first of many.

Europe and the UK need to figure out where they are going given the strategic break with the US. We think neither the US nor Europe is currently prepared for an accelerated unwind, so we think both sides will for the moment downplay the break. Indeed unwinding the US from NATO will probably make Brexit look like a serene relatively uncomplicated operation. For the next few years we expect strategic direction in Europe to be set by informal consultation among France, Germany and the UK. The UK will be loath to admit its special relationship with the US has ended – not least because that admission would hem in its own powers of maneuver. But the value of the UK to an isolationist US is actually quite limited.

The Syrian government appears to have reached a *modus vivendi* with its important Kurd and Druze minorities. They will support a unitary state in return for keeping some informal functional autonomy through the next few years while a permanent political settlement is being arrived at. Those agreements strengthen the central government in dealing with an emerging insurgency in the coastal Alawite community led in part by loyalists of the former regime. Israel is occupying part of Southern Syria. We suspect its goal is Syrian recognition of Israeli annexation of the Golan Heights in return for an Israeli withdrawal.



Green Economy

Japan has made progress turning manure from dairy herds into hydrogen. We review the biogas industry in a research note. There may be some interesting opportunities for social investment – a program of investing which provides access to capital at moderate commercial rates to projects with high social value which would not normally have access to capital.



Domestic Economy

Consumer and business confidence have both dropped in the face of Trump's radicalism.

Inflation is rising. Employment is still strong. The Federal Reserve indicated no change in rates, but eased up on quantitative tightening. The Fed's retreat from being an inflation hawk is notable.

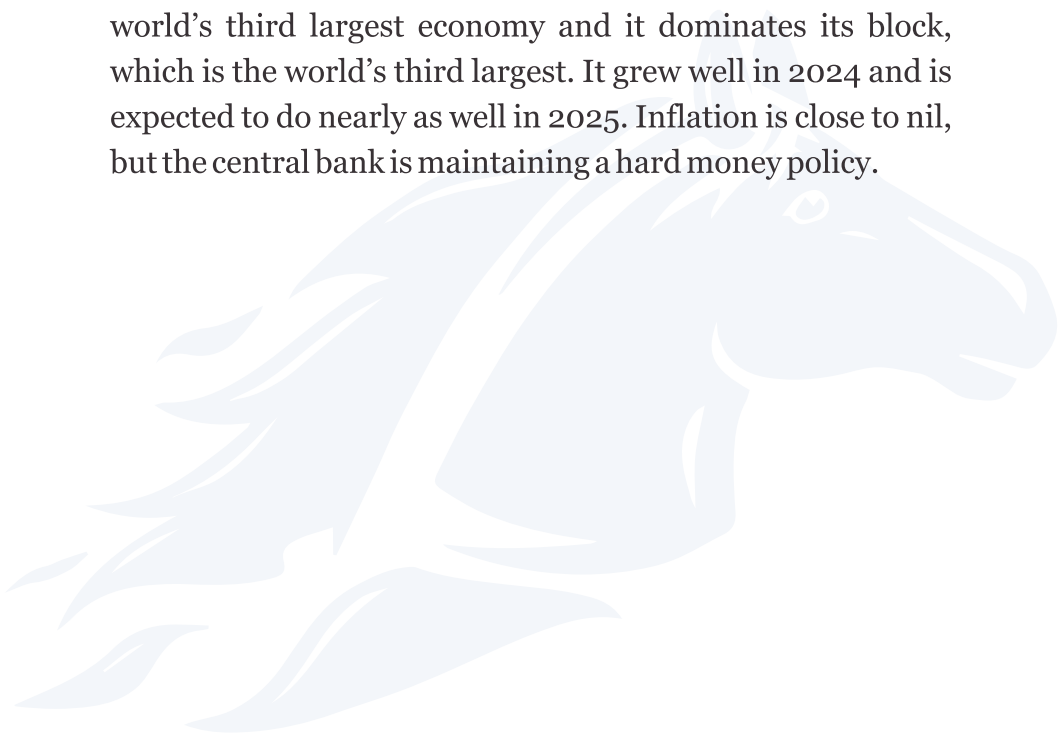


International Economy

We make our periodic survey of the global economy. Given the importance of geopolitics at the current moment, we organize the discussion by major blocks (table next page.) The reader should be aware these are not a truly homogeneous set of numbers. Countries publish their data

with varying degrees of lag. Forecasts are drawn from a mix of official and private sources. Going in to this year most countries were looking forward to a comfortable acceleration in growth in 2025. Currently these estimates are being revised down due to the Trump trade war. But the shape of that war is evolving daily and revisions are accordingly uncertain. So this data should be taken with a large grain of salt. There is still much to be learned however if we focus on relative magnitudes and directional trends.

The China block consists of China and a small group of countries that reject the Western alliance and rely on support from China to support them in that rejection. China is the world's third largest economy and it dominates its block, which is the world's third largest. It grew well in 2024 and is expected to do nearly as well in 2025. Inflation is close to nil, but the central bank is maintaining a hard money policy.



Block	Country	GDP	GDP % Block	Population	GDP per capita	GDP Chg 2024	GDP Chg 2025	Inflation	Bill Rate	Bond Rate
China	China	17.79	87%	1411	12.6	5.2	4.5	0.2	1.9	2.14
	Russia	2.02	10%	144	14.0	4.1	1.3	9.5	21	14.66
	Iran	0.4	2%	90.6	4.4	0	0	31.7	23	30
	Pakistan	0.33	2%	247	1.3	2.5	3	4.1	12	12.63
	Total	20.54	100%	1892.6	10.9	5.2	4.1	1.8		
Europe	EU	20.3	74%	450	45.1	0.9	1.5	2.7	2.4	3.12
	UK	3.31	12%	68.3	48.5	0.9	1.6	2.5	4.5	4.75
	EFTA	1.51	6%	14.84	101.8	2.6	1.5	1.7	0.25	0.4
	Canada	2.14	8%	40	53.5	1.5	1.8	2.4	2.75	3.26
	Total	27.26	100%	573.14	47.6	1.1	1.5	2.6		
Indo-China	India	3.57	65%	1448	2.5	6.5	6.5	5.2	6.25	7.09
	Thailand	0.52	9%	72	7.2	2.5	2.9	0.4	2.15	2.13
	Singapore	0.5	9%	6	83.3	4.4	2.6	2.8	2.6	2.78
	Malaysia	0.4	7%	35	11.4	5.1	5	1.8	3	3.75
	Vietnam	0.43	8%	100	4.3	7.1	6.8	3.6	5.5	2.96
	Sri Lanka	0.084	2%	22	3.8	5	5.2	1.3	8	11.76
	Total	5.504	100%	1683	3.3	6.2	5.7	4.1		
Latin America	Brazil	2.1	42%	211	10.0	3.4	1.6	4.8	14.25	14.7
	Mexico	1.79	36%	130	13.8	1.2	1.7	4.2	10	9.84
	Argentina	0.646	13%	45	14.4	-1.8	5	118	29	29
	Chile	0.33	7%	20	16.5	2.6	2	4.5	5	5.84
	Panama	0.083	2%	4.5	18.4	2.9	3	-0.2	4.65	7.88
	Uruguay	0.082	2%	3.4	24.1	3.1	3	5.5	9.6	2.74
	Total	4.949		410.5	12.1	2.6	2.2	4.5		
Mideast	Saudi Arabia	1.07	35%	33	32.4	1.3	3.3	1.7	5	
	UAE	0.51	17%	10.5	48.6	5.4	5.4	2.9	4.4	5.71
	Israel	0.51	17%	9.75	52.3	2.8	4	3.2	4.5	4.53
	Egypt	0.396	13%	114.5	3.5	2.4	3.8	23	27.25	20.75
	Iraq	0.25	8%	45	5.6	0.1	4.1	3.2	4	
	Kuwait	0.16	5%	4.8	33.3	-2.3	3	2.5	3.94	
	Oman	0.1	3%	5	20.0	1.4	2.4	1.3	5	5.1
	Jordan	0.051	2%	11.4	4.5	2.3	2.7	2.1	7.34	7.18
	Total	3.047	100%	233.95	13.0	2.2	3.8	2.4		
Pacific	Japan	4.2	40%	125	33.6	2.2	1.7	2.7	0.5	1.53
	S Korea	1.7	16%	52	32.7	2	1.6	2.3	2.75	2.83
	Taiwan	0.814	8%	23.4	34.8	4.3	3.1	2.2	1.68	1.6
	Philippines	0.437	4%	115	3.8	5.1	1.7	3.2	5.21	6.16
	Indonesia	1.37	13%	281	4.9	5	5.1	1.6	6.7	7.18
	Australia	1.73	16%	26.6	65.0	1.3	1.7	2.4	4.1	4.64
	New Zealand	0.252	2%	5.2	48.5	-0.5	1.4	2.2	3.75	4.63
	Total	10.503	100%	628.2	16.7	2.7	2.2	2.4		
Africa	South Africa	0.381	29%	63	6.0	0.6	1.8	4.4	7.5	11.58
	Botswana	0.02	2%	2.5	8.0	-3.1	3.3	3.8	1.9	9.78
	Kenya	0.108	8%	55	2.0	5	5.4	3	10.75	13.91
	Nigeria	0.364	28%	228	1.6	3.4	4.2	35	27.5	19.1
	Morocco	0.144	11%	37.7	3.8	3.2	5	1.7	2.25	2.92
	Algeria	0.247	19%	46	5.4	2	4.5	5.3	3	
	Tunisia	0.048	4%	12	4.0	1.2	2.3	3	8	8.6
	Total	1.312	100%	444.2	3.0	2.3	3.7	3.5		
US	US	27.7		340	81.5	2.8	1.7	3.2	4.25	4.64
Total ex US		73.115		5,865.59	12.5					
World ex US		78.3		7,722.00	10.1					
World		106		8,062.00	13.1					
Western Alliance	core	65.463		1541.34	42.5					
	periphery	13.5		2327.45	5.8					
	Total	78.963		3868.79	20.4					
Eurasian Coalition	core	53.304		4,148.74	12.8					
	periphery	18.499		1,272.65	14.5					
	Total	71.803		5,421.39	13.2					

Internally the government is working through a financial mess in real estate development/municipal finance but that is being handled through fiscal measures rather than monetary. Externally the country has faced flight by foreign investors concerned about the political environment. However the government bond rate is only slightly above the money market rate, indicating no serious capital dearth. Russia is in the grips of a war-time inflation which it is under reporting in the official statistics. The real figure is probably closer to the 21% money market rate than the reported 9% rate. Iran is also suffering inflation and rate extremes as it faces US led embargoes. Pakistan is comparatively stable at present.

The European block is dominated by the EU which is the world's second largest economy. It is comparable in size to the US economy, but with almost twice the population of the US, its per capita income is about half that of the US. Associated to the EU are the UK, EFTA and Canada. The UK is closely tied to the EU by trade but has sought to distance itself from the political/governance structures of the EU. EFTA is the combination of Iceland, Norway and Switzerland. Switzerland constitutes 2/3 of the GDP in this group and Norway 1/3. Enriched by Swiss banking and high tech and Norway's oil this group has the world's highest per capita income. Canada is culturally linked to Europe but strongly linked to the US by trade. We have moved it from the North American block to the European block to reflect shifting alignments in the world. Growth in Europe was slow in 2024 as the economy was disrupted by the Russo-Ukraine war. It is forecast to modestly accelerate in 2025. Interest rates are restrictive in the UK but modestly reflationary elsewhere. Bond yields exhibit modest duration premiums indicating confidence in long term stability.

The Indo-China block is dominated by India. India's huge population pulls the per capita income down to a low level. But within that huge population is a middle class urban population which is more people than the US middle class albeit with wallets that are only about half the US size. For global marketers of consumer products India is, therefore, an important market. The Indo-China region is the fastest growing in the world as manufacturers seek to diversify their base of supply away from China. Inflation is running a bit

above world averages, but central banks are following sound money policies. Nevertheless, investment by India's private firms has slowed as the owner/managers contemplate a world environment which is growing less attractive. Except for India and Sri Lanka, long rates in this block are low indicating strong confidence in the government.

Latin America is a bit smaller than Indo-China. Steady low growth in Latin America implies that gaps are widening. The group is dominated by Brazil and Mexico, both of which are currently in low growth mode. This is another region with above average inflation and restrictive Central bank policies. Bond rates are at or above these restrictive money rates indicating a lack of long term confidence. Argentina is a special case – the country is currently in an inflationary crisis but instability is the chronic feature of the country.

The Mideast is a bit smaller than Latin America, but it is growing faster and that growth is expected to accelerate. The price of oil has an outsize impact on the regional economy, however, and oil price volatility can change the picture substantially. The three larger economies in the region enjoy per capita incomes comparable to Europe. Outside of Egypt and Iraq inflation is low, central banks are taking a sound money stance and yield curves are close to flat. Egypt is struggling with high inflation. Iraq is not fully stabilized as a country yet.

The Pacific Group consists of a chain of countries closely connected to China by trade but politically aligned to the US. China is eager to break this alignment which it sees cutting across its trade routes and potentially supporting a US led embargo of its economy. The two weakest members of the group, Taiwan and the Philippines, are under constant pressure from China. The group is roughly the combined size of Latin America and the Mideast. It is led by Japan, but Japan is a nation in decline. The Japanese economy is currently one third below its peak size and the Japanese birth rate is about 60% of the replacement rate as families contend with the dropping per capita income. Similar to Latin America the composite picture is steady slow growth but some of the smaller economies in this group are doing substantially better. The basic pattern of low inflation, sound

money policies and modest duration premiums is exhibited in this region also. Exceptions are Japan and Taiwan which are following reflationary policies.

Africa is a vast continent most of which is too impoverished to hold the attention of investors. A few countries have managed to combine a natural resource base, a reasonably stable political system and peaceful relations with neighbors to move forward economically. Monetary conditions must be examined on a country-by-country basis as there is no common pattern in this group.

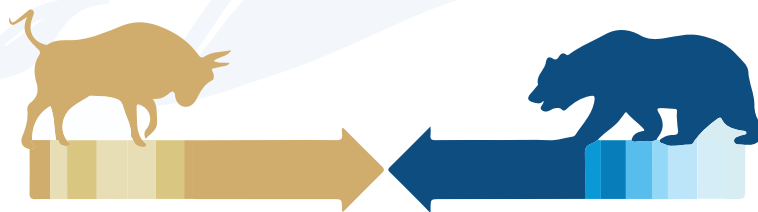
The US possesses the world's largest economy and the second highest per capita income. It grew well in 2024 but is expected to slow in 2025. Inflation has come down but is still well above the Central banks target. The prior administration was following anti-inflationary policies, but the new administration is following pro-inflationary policies. The Central bank is faced with either accommodating the political arm or taking more restrictive measures. Bond yields are elevated versus international peers, but the premium over money rates is comparable to the premium in other countries.

The 74 countries listed account for 95% of world GDP. The balance consists of 121 countries comprising 23% of world population and 5% of world GDP. These countries mostly operate at a subsistence level and have very limited participation in the global capital market.

Generally the world presents a picture of modest growth, monetary orthodoxy and relaxed capital market conditions. The perennial exceptions – Russia, Iran, Argentina, Egypt – remain exceptions.

World GDP is forecast to expand by \$2.5T this year (2.4%.) China will capture 32% of that growth while the US and Europe will capture 18% and 16% respectively. Indo-China will capture 12% and the Pacific 9%. The major cyclical uncertainty is the extent to which political turmoil in the US will impact and slow what would otherwise be an accelerating growth trend in the rest of the world.

Long term the key question is the future of the Western alliance. Possession of a large economy under politically stable national control has made the US the leader of the Western Alliance. This alliance consists of a core and a periphery. The core consists of the US, Europe and Pacific blocks and it represents a combination of political and economic alignment. The periphery consists of Latin America, Indo-China and the Mideast. They align to the core block on economics but remain largely unaligned on politics. Basically they go-along with the most powerful group without feeling deeply connected to it. With 75% of the world economy and just under half the world population, the Western alliance is the dominant power in the world. Leadership of this grouping has brought the US substantial advantages in economic and military affairs and it has borne rich dividends in terms of US prosperity. The faction currently in power in the US, however, wishes to disentangle from the Western alliance. Were that to happen a new Eurasian Coalition could form from the China, Indo-China and European blocks. It too would likely pick up a periphery in the Pacific, Mideast and Latin America. The new grouping would have the same economic heft as the Western alliance, but would be less politically cohesive. While not explicitly formed against the US, this Coalition would focus on managing trade in Eurasia to the partial exclusion of the US. The US would be left to sustain its prosperity as best it could in a semi-isolated state.



Capital Markets

In march US equities trimmed modestly, with the leadership Large Cap Growth sector leading the way.

Foreign equity and Treasury securities were up by the barest fraction. Midgrade bonds, preferreds and REITs all sold off. The euro showed strength and gold continued rising strongly. Over the past six months most asset classes are flat, having risen on Trump's election victory and having fallen on the

unveiling of his policies and appointments. We would characterize the market as registering moderate concern and taking a wait and see attitude.

Table 1: Recent Market Performance

Asset Group	Asset Class	6-month trend	3-month return	1-month return
Equity	US Large Cap	flat	-4.55%	-4.86%
	...Large Cap Growth	flat	-8.57%	-6.53%
	...Large Cap Value	flat	-1.81%	-2.21%
	...Growth – Value	flat	-6.76%	-4.33%
	US Mid/Small Cap	flat	-8.58%	-4.76%
	Intl Developed	flat	6.45%	0.52%
	Intl Emerging	flat	3.83%	1.16%
Fixed Income	Treasury 3-7 year	flat	1.93%	0.21%
	Treasury 7-10 year	flat	2.83%	0.00%
	TIPS	flat	3.65%	0.98%
	Municipal	flat	-1.01%	-2.24%
	Investment Grade	flat	1.40%	-0.94%
	Medium Grade	flat	-1.20%	-1.85%
	Preferred	falling	-3.75%	-3.99%
Commodity	REIT	flat	1.77%	-2.75%
	Euro	flat	4.85%	4.15%
	Gold	rising	15.86%	9.58%
	Crude Oil	flat	-4.19%	2.69%



Advice

Our basic advice is to not time markets but rather to maintain ones correct strategic positioning in most instances. In general politicians roll into office and roll out without having had much impact on the economy which lumbers on unstoppable.

The present time is somewhat different. The Trump administration is intent on changing important fundamental institutions of the country. Institutions to be changed include citizenship, immigration tracks for legal applicants, taxation, foreign trade, scope of the Federal government's mission, resourcing of the military and core foreign alliances. That is a lot of things to change all at once. Most of these changes require Congressional action to accomplish, but Trump is attempting instead to accomplish them by decree (executive orders) and to (perhaps) seek eventual Congressional acceptance of a fait accompli.

To supporters those changes are long overdue reforms, whereas to critics they are thoughtless acts of vandalism. We profess ourselves to be skeptics. We feel those who govern least govern best and heavy handed political interventions in the economy come for us freighted with question marks. Similarly abandoning established national diplomatic practice for new initiatives results in difficult to calculate but profound consequences.

To give a minor example, several graduate students in the US on valid visas have been deported in chains for engaging in political free speech rights that are part of the very air of America. Will these well publicized events cause foreign graduate students to switch from US universities to UK universities as their destination of choice? Yes - to some degree. Will that flight of talent negatively impact our high tech industries? Clearly - to some degree. Can we fix the problem by educating more Americans? Only over time

spans measured in decades. Is “some degree” going to be big enough to effect the competitiveness and thus profitability of our high tech industry (about 40% of stock market capitalization at the start of 2025.) Impossible to say at this juncture.

It is clear to us that the Trump administration is raising the risk level. We feel an appropriate portfolio response is to accumulate cash, either by opportunistically raising it or by pausing ongoing investment programs. As the situation clarifies itself that cash can be redeployed to make any necessary adjustments to the strategic positioning.



**In Memoriam: Barr Rosenberg
(November 13, 1942 -February 2, 2025)**

We note with sadness the passing of one of the founding fathers of quantitative investing. Quantitative investing has several roots, one of which is John von Neumann and Oskar Morganstern’s determination of when the correct decision in the face of uncertain outcomes is to maximize the expected utility of the decision. Harry Markowitz then converted this mathematical theorem to a computable algorithm by formulating the investment decision as maximizing expected return - λ x covariance of return where λ is a scalar reflecting the investor’s capacity to bear risk. This formulation moved investing into the field of operations research. Operations research had taken off during World War 2 and in the 1960s was a rapidly developing field at the intersection of mathematics, computations and process engineering. But to move the program forward a quantification of risk (i.e. of covariance of asset returns) was needed. William Sharpe supplied the first attempt. He developed the market model asset return – risk free rate = β [market return – risk free rate] + specific return This is a straightforward single factor linear model of returns which decomposes assets returns into two components, the market

component and the specific return component. It suggests the model of risk covariance(asset1 return, asset2 return) = $\beta_1 \beta_2 \text{variance}(\text{market return})$ This model would hold if asset specific returns were truly specific and thus uncorrelated to one another.

This proved not to be the case and the market model did not lead to a useful portfolio construction tool. As a result, quantitative investing languished as an impractical academic idea tucked away in the corners of operation research.

C. W. Churchman, one of the founders of operations research at UC Berkeley was ambitious to change that. In 1972 he prevailed on the National Science Foundation to give a research grant to a young faculty member – Barr Rosenberg. Rosenberg was a Harvard trained econometrician. Econometrics itself was a rapidly developing field at the time, but its main focus was macroeconomic modeling. Applications of econometrics to financial market data was somewhat out of the mainstream. Barr's first modeling attempt was a multi-factor model of beta of asset $I = \sum_j c_j \text{descriptor}(i,j) + \text{noise}(I)$ Here the descriptors were various facts about the asset such as industry classification, financial strength, valuation ratios which could be looked up in financial databases. This model (eventually known as USE1) proved superior to the betas which had been extracted from time-series analysis of the market model. Barr and his collaborator Vinay Marathe quickly realized that a superior approach would be a linear multi-factor model of returns $\text{return_asset_i} = \sum_j \text{factor_return_j} \text{factor_exposure}(i,j) + \text{specific_return}(I)$ For a well chosen set of factor exposures it turned out that covariances of specific return were nearly uncorrelated and so one could calculate $\text{cov}(\text{asset_i}, \text{asset_j}) = \sum_{pq} X(i,p) X(j,q) \text{cov}(f_p, f_q) + d(i,j) \text{variance}(\text{specific_return_i})$ where $d(i,j)=1$ if $i=j$ and $d(i,j)=0$ otherwise. Here X represents the factor exposures and f_p the factor returns. This model (known as USE2) led to a practical portfolio construction tool and quantitative investing moved from academic plaything to the cutting edge tool of high finance.

Barr played a central role in moving academic insight into daily practice. He proved a brilliant educator who could

explain quantitative investment ideas to investment managers and endowment trustees. At this time those professionals were well educated in the financial statement analysis developed by Graham and Dodd. But ideas such as a statistical analysis or linear regression were not part of their intellectual toolkit. Barr showed how these new tools could help improve on the age old problems of controlling investment risk, selecting investments and evaluating the results of investment programs.

Barr also was a successful entrepreneur. He started a firm, Barr Rosenberg and Associates (later Barra) to deliver the necessary models and optimization tools to institutional investors. Initially a sole proprietorship with a handful of collaborators, the enterprise quickly grew to need deeper backing. At this time the business Rosenberg was engaged in was understood to be a form of electronic publishing, so he sold the firm to Ziff-Davis a substantial publishing company. Barr remained on as the head of the subsidiary. With Ziff-Davis's backing Barr and his team launched on building a VAX time sharing platform to facilitate investment manager use of the risk model. As is the way of enterprise software development this project got behind schedule. Neither the investment team (mostly from a finance background) nor Ziff-Davis were in a position to understand that this was an entirely normal outcome and tension developed between the team and Ziff-Davis. Within the investment team Barr was the dominant intellect, but the habit of running all decisions through him led to an increasingly stifling corporate decision process. The CEO of Ziff-Davis himself was struck with cancer at this time and he decided to simplify his life. As a result he sold Barra to its management team led by Andrew Rudd. Rudd became the CEO of the independent company, while Rosenberg remained on as Chief Scientist.

This arrangement lasted until Barra was well underway as an independent company and then Barr left to found Barr Rosenberg Institutional Equity. This was an early quantitative active management shop. Barr's towering reputation attracted funds to the firm and the firm's early results proved exciting. As a result it grew into a midsize independent asset manager. To secure good distribution, Rosenberg sold the firm to the French insurer Axa. The firm

became known as Axa Rosenberg, with Barr retaining executive leadership and a significant ownership stake. As had happened at Ziff-Davis, the initial honeymoon between Axa and the investment subsidiary eventually cooled. About 2010 the investment shop began an upgrade of its internal software by reimplementing the previous Fortran system in Fort. In the process of doing so a bug was introduced into the analysis which went undetected in the production system for some time. Once it was detected, Rosenberg made the executive decision to release a bug fix as part of the regular software maintenance cycle and not as an immediate fix. This proved a poor decision as it meant the firm was knowingly operating a compromised system for several months. When it learned of the situation, Axa saw this as an opportunity to terminate its management contract with Rosenberg and gain full control of the subsidiary. As a result Axa built up controversy around Rosenberg's leadership. This attracted SEC scrutiny and the SEC eventually started an enforcement action against Rosenberg accusing him of fraud. Rather than litigate this dramatically inflated version of events, Rosenberg agreed to retire from the investment industry. Axa gained little from its corporate politics, as the reputation of Axa-Rosenberg had been destroyed by the in-fighting and clients withdrew their accounts. A lengthy recomputation eventually showed that financial damage incurred by clients due to the bug was modest and it was recompensed by the firm. So the final fate of Rosenberg's second firm was simply sad.

Barra, meanwhile, under the leadership of Andrew Rudd and Barr's successor Richard Grinold, went from strength to strength. The USE2 model worked, but many details were based on Barr's professional judgment rather than deep research. Also the model was limited to US equities. Grinold established an intellectually vigorous research team which put the model on a much firmer foundation. It also extended the model to fixed income securities and to international stocks and bonds. Rudd proved a successful business manager who proselytized quantitative investing to the global investment community. Barr had started the tradition of the firm presenting its research work to clients at an annual multi-day conference at Pebble Beach. By the late 1990s the Barra Research Seminar had built a substantial reputation in

the investing world, even to the point of attracting interest from financial journalists. All of these activities moved quantitative investing from the margin of the investing world to being a part of established orthodoxy. By 2000 more than half of global investment capital was being managed using the Barra model.

Assessing these contributions to the investment art, one sees that Rosenberg played an absolutely critical role in creating quantitative investing as a practical approach to investing. The practical success of quantitative investing created both interest in and funding for quantitative research in academic finance departments. It is fair to assume that the entire flowering of quantitative research which has occurred never would have happened absent the Barra Risk Model. In the domain of practice, index funds, hedge funds, ETFs, and algorithmic trading all flowed either directly out of the quant school or gained significant momentum from it. In terms of failures, portfolio insurance and the panic of 1987 should be charged to the teething pains of the quant school. But the much larger 2008 crash in mortgage derivatives and the ensuing banking crisis has its roots in pre-quant Wall St and is not chargeable to the quant school. Rosenberg's outstanding successes were in research and in educating a conservative industry in new ways of thinking. He successfully launched two firms, but his strength as a business leader was in the early stage firm and he stumbled in the mid-stage.

Retirement from the investment industry by no means ended Rosenberg's creative life. He had a profound interest in Buddhism and became a practicing Buddhist. A Tibetan lama by the name of Tarthang Tulku Rinpoche had established an institute of Buddhist studies in Berkeley known as the Nyingma Institute. The name refers to the Nyingma school of Tibetan Buddhism. This is one of the four major schools of Tibetan Buddhist teaching. It is the eldest school, having been founded by Padmasambhava in the eighth century. For centuries the school flourished in Tibetan monasteries. After the Chinese (communist) invasion of Tibet in 1950 led to repression later in the decade, Tarthang went into exile (1958) and eventually settled in Berkeley California. As a leading member of the last generation of Buddhist scholars

formed in the traditional manner he saw that he had a duty to preserve this cultural treasure. He founded the Nyingma Institute to have the dual mission of religious formation within the tradition of the school and to provide cultural education to those interested in Tibetan Buddhism separate from any personal faith or practice. As part of its activities, the Institute has a publishing house, Dharma Publishing, which has a vigorous publishing program of Tibetan texts both in the original languages and in translation. As such it has played a vital role in preserving and transmitting Buddhist teaching and connecting it to the wider cultural mainstream. The name of the press refers to a multi-faceted concept of Buddhism. Dharma refers to the spiritual/energetic balance of the universe, to the moral duties of the individual within that balance and to the body of teachings which explains this matter.

Rosenberg was deeply involved with the work of the Institute. He served as co-dean for 18 years and was also a key benefactor of its activities. After his wife died (2022), Rosenberg lived out his last years in the Institute's retreat center in rural Sonoma county. His successor as dean had this to say at his passing:

“Barr’s extraordinary life encompassed the heights of academic and professional achievement with the depths of spiritual altruism. A legendary economics professor and a pioneering innovator in quantitative financial analysis, he brought the same penetrating intellect to his study of Dharma. His rare ability to dwell patiently in the realm of formless abstract concepts allowed him to bridge the worlds of analytic thinking and spiritual understanding in profound ways.....

Barr embodied the highest altruistic mind, with a boundless sense of care for his community, family and friends. We rejoice in a life dedicated to the Buddadharma, animated by his gentle vision of the interconnectedness of all beings. His mastery of worldly knowledge, skillfully channeled toward the highest spiritual endeavors, had a historic impact in the preservation of Tibetan culture and Dharma at a most critical time.” (In Loving Memory of Barr Rosenberg, Pema Gellek and Lama Palzang.)

It is quite possible that Barr’s contribution to the preservation

of Tibetan culture may ultimately come to be seen as more significant than his foundational contributions to investment science. In both the worlds which he inhabited, those who knew him personally remember him with deep respect and affection.

Cover Photo

The picture is by the Scottish academic painter James Elder Christie (1847-1914.) Currently in the National Gallery of Scotland (www.nationalgalleries.org/art-and-artists/4757), the painting is about 2 foot by 3 foot. The title of the piece is The Pied Piper of Hamelin. It records a well known folk tale best known from the version published by the Grimm Brothers. According to legend the town of Hamelin was overrun by an infestation of rats. A mysterious stranger made a contract with the town to rid it of the rats. This deed he accomplished by walking through the town playing a pipe. The rats followed him out of town and into the river where they drowned. But when the piper claimed his fee the town reneged on its contract. So the piper again passed through town playing his pipe. This time he was followed by all the children of the town who were lost and never seen again.

This legend appears to have a historical base. Hamelin is an actual place located on the Weser river in Lower Saxony. Today the town has a population of 57,000. A chronicle written in 1370 refers to this event which is dated to June 26, 1284. A stained glass window in a church built c 1300 commemorated these events, but was destroyed in 1660. A street in the town is recorded as the place where the children were last seen. To this day any public playing of music or dancing in the street is forbidden. Exactly what the event was that the legend records is open to speculation. A plausible explanation is that it records either a garbled memory of the Children's Crusade of 1212 or a more local but similar event not otherwise known to history. Outbreaks of crusading fervor occurred sporadically in Europe from 1095 to about 1400. In 1212 a large number of youths and children were swept by the fervor and set off to free the Holy Land. They were taken on board ships in Marseilles by merchants who promised them passage to the Holy Land, but then they were actually sold as slaves in Tunis and never returned home.

While such events may sound incredible to modern ears, the autobiography of St Teresa of Avila (1515-1582) records how at age 5 she was stopped by her uncle on the road out of Avila as she and her brother were running away to join the Crusade. Trafficking in youths is sadly still with us and occasional mass enthusiasms of youth for reforming the world still occur.

Of all the wrongs done by man to man the mass abduction of children is one of the most keenly felt. Eight hundred years have passed with the losses brought by numberless wars and plagues but Hamelin's grief at the loss of its children is not assuaged and the whole world has come to hear of it.





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