

IMCZ NEWS



FEBRUARY 2018 / MARCH 2018



PRESIDENTIAL DISPATCH

State of the Union

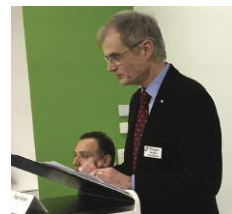
The New Year is once again off to a good start for the IMCZ. We had a good turnout for our first Special Stammtisch of the year, a presentation on Wikipedia by Patrick Kenel, a Wikipedia administrator. As you read this, we shall be recovering from our 23rd annual Burns Supper, with an attendance similar to last year's, and preparing for our Annual General Meeting (AGM) on Feb. 8th. The AGM is one of our most important events. It is your opportunity to understand our financial situation, to question the board, to vote on important business and to bring your own issues to the agenda. All members are invited and encouraged to attend. The club will offer a brief apéro (beer and soft drinks) beforehand, and some of us plan to dine together (at our own expense) in the CU Restaurant afterwards and hope that you will join us. The [agenda](#) is attached to the [event description](#) on our website. You can find the [2017 minutes](#) on our website, under "About Us" – "Club History", once you have logged in.

It has been an eventful year, thanks largely to the efforts of our new Events Coordinator, Enrico dell'Angelo, who has organized interesting excursions and Special Stammtisch presentations for us during the past year. Thanks also to Stephen Butterworth and Newsletter Co-Editor Roger Dixon for continuing to organize bowling activities. Of course, there is plenty of unexploited potential in the club. As Roger Dixon pointed out in his June editorial, we share many interests: some of the hobbies listed in our profiles include over 20% of our membership.

We face a few challenges in the coming year. Our membership is stable, but well short of what it was when I served my first term on the board in 2010. We need to rebuild it. We on the board have launched several outreach initiatives during the last year, but the best outreach is word-of-mouth recommendation. A few of you have brought visitors to our Stammtisch and recruited new members; many thanks! I encourage the rest of you to do likewise. If you enjoy the club as much as I do, don't keep it a secret! Invite your friends and colleagues to get to know us by joining us at a Stammtisch!

While it is important to have a good membership base, it is even more important to have members who actively participate. As David LeBow, who was president when I joined the club in 2007, said, this is your club. It lives from your interest, and to serve your interests. Many of the club's activities have come from the membership. Good examples are the aforementioned bowling evenings and the Ski Race, which Peter Widdup is organizing. It is your interest, which calls them into being, and your interest which keeps them alive. Please help us serve your interests better. If there is an activity you would like to see, let us know. Together we can make it happen! Fill out a [contact form](#) on the website, [drop us a line](#) or buttonhole one of us at the Stammtisch! Better still, volunteer to organize an activity or to serve on the board. We look forward to working and enjoying our club together in the coming year!

Roger Brooks, President



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IMCZ Introducing... New members THE IMCZ WELCOMES:

David Memel

David Memel was born and raised in Los Angeles, California, but left it in the mid-eighties and has lived in 14 US states and Europe. David has over 25 years of leadership, innovation and operating experience in multinational pharmaceutical, diagnostics, provider and payer organizations. He has held both country level and global commercial, clinical, scientific and informatics positions. David began his career as a Diagnostic and Interventional Radiologist. He received his B.S. and M.D. from the University of California at Los Angeles, his M.S. in Medical Informatics from the University of Utah, and a dual MBA from Cornell University and Queen's University in Canada. Currently, he is the Global Product Strategy Lead for Shire Pharmaceuticals' Haematology Franchise. Prior to joining Shire, David was the Managing Director of Klaipeda Health, a healthcare and life sciences advisory services company. As Managing Director of Klaipeda Health, David advised start-up, mid-size and global healthcare and life sciences organizations on product and service development, business model design, market development, commercialization strategies, product value demonstration and market access. David enjoys the outdoors, especially being in or near the water, golfing and walking in nature. He also enjoys meeting new people and giving back to the community. Moving to Switzerland is the beginning of a new journey for him.



FUTURE EVENTS

- THURSDAY 8 FEBRUARY 2018
Annual General Meeting, AGM. *Apero at 6 pm, meeting starts at 6:30 pm to 8 pm at the City Garden Hotel.*
- TUESDAY 20 FEBRUARY 2018
Kegeln (9-pin Bowling) *at Hotel Zugertor, Baarerstr. 97, Zug. Food served at 18:15; play starts at 20:00 hours*
- THURSDAY 8 MARCH 2018, 6:30 PM – 8 PM
Investment Opportunities in 2018, *presentation by Pascal Schuler from Credit Suisse.*
- FRIDAY 16 MARCH 2018 • **Ski Race in Andermatt.** *Ski weekend organised by IMCZ member Peter Widdup.*
- SUNDAY 18 MARCH 2018, 11 AM – 5 PM
Expat Expo, *at the Lorzensaal in Cham*
- THURSDAY 22 MARCH 2018, 6 PM – 8:30 PM
Meet & Greet with ZIWC *at the City Garden Hotel.*



Moons The month of January this year saw two interesting astronomical phenomena. It had both a **blue moon** and a super moon. Have you heard the sentence, “we meet once in a blue moon”? Well, if any calendar month has two full moons, the second full moon is called **blue moon**. January had a full moons on January 2nd and 31st. This phenomenon occurs about once every 36 months. As for the **super moon**, this is when the moon looks larger than usual, because it is closer to Earth due to its elliptical orbit. This occurs about once every 14 months. However, it is very rare indeed for both to occur in the same month.



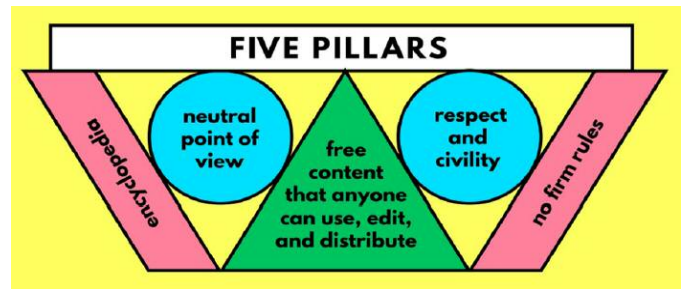
Special Stammtisch on Thursday January 11, 2018 **Wikipedia**

On a well-attended rainy Thursday evening, the former president of Wikimedia, Switzerland, Mr. Patrick Kenel, gave a presentation about the ubiquitous Wikipedia. One has to look hard in order to find someone who hasn't used Wikipedia. It is virtually the only serious, advert-free portal available.



Patrick emphasised that it is financed purely by donations of the readers, and will remain advert-free and available free of charge to all. The inspiration for it came from the ancient library of Alexandria in Egypt, and it was meant to be a unique body of knowledge or a vast encyclopaedia covering most of human knowledge available on line 24 hours a day, every day of the year.

Although English is the back bone of the Wikipedia group with over 5 million articles, it also comes in several other languages, the most important of which are shown in the figures below. In fact if you click on the language button (arrowed), you can count over sixty languages, including Chinese and Arabic.



Wikipedia itself is hosted by the **Wikimedia Foundation**, which is a non-profit organisation, and host several other services, such as:

- Wikibooks, for free textbooks,
- Wikiversity, for free course materials
- Wikisource, Free Library
- Wikivoyage, Free travel guide
- Wikinews, Free news source
- Wikiquote, Free quote compendium
- Wikispecies, Free species directory
- Wiktionary, Free dictionary
- Wikidata, Free knowledge base
- MediaWiki, Free & open wiki application.
- Meta-Wiki, community coordination & documentation.

WIKIPEDIA
The Free Encyclopedia



If you want to get involved, and wish to contribute an article, you need to start editing some Wikipedia entries. There is always an Edit button. Having accumulated a few edits to your credit, you can open an account and start contributing. Remember Wiki stands on five pillars as shown below. The graphic is also a link to a pdf file on Wiki.

www.wikipedia.org

STAMMTISCH
Every Thursday from 18:00-20:30
At the City Garden Hotel

LORZENZAAL - CHAM
Sunday, March 18th
11AM - 5PM
Free Admission!

Admission free!
www.expat-expo.info
By, for and about English-speaking Switzerland

expat expo

Everyone is welcome!




ANNUAL GENERAL MEETING

The IMCZ board invites *all members* to come and participate in the AGM. The meeting will take place on Thursday February 8, 2018 at the City Garden hotel in Zug. An aperitif will be served at 18:00 hours for a 18:30 start.

The Agenda has also been posted on our Website:

1. Approval of Minutes of the minutes for the last AGM held on 9.2.2017. The minutes can be found on our website under "About Us" – "Club History" (login required).
2. President's Annual Report for 2017
3. Event Coordinator's Report for 2017
4. Financial Report for 2017
5. Auditor's report for 2017
6. Awards
7. Discharge of the auditors for 2017
8. Discharge of the board for 2017
9. Election of the president for 2018
10. Election of the board for 2018
11. Election of the auditors for 2018
12. Proposed Budget for 2018
13. Fixing of Membership Dues for 2019
14. Any other business

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Sports Nutrition for Kids

Contributed by IMCZ member Remo P. Jutzeler van Wijlen, Head R&D Sponser Sports Food Ing. Appl Food Sciences, MAS Nutrition & Health ETHZ

In most people's perception, sports food is a no-go for kids. Possibly, this common opinion is based on the impression parents and non-athletes might have gained from taking food supplements. They perceive it as being mostly unnatural, chemically-derived and potentially containing doping substances or other such things. Although legal, it is considered a drug and therefore harmful for their kids. However, sports nutrition is basically about concentrated food or partly isolated nutrients, and for the most part mainly concerned with convenience and digestibility, adapted for use in a busy daily schedule of an athletic environment – not “drugs” or supplements for specific performance requirements.



Considering the increased energy and protein needs of kids in general, it becomes obvious, due to their state of growth, that intensely sporty kids – i.e. 4-5 or more guided training units and/or competitions per week – have even higher (relative) nutrient needs than adults. Additionally, kids are potentially prone to poor nutrition for several reasons: unhealthy food preferences, distraction hindering an adequate diet on a daily basis and/or timing with regards to physical activities, eating time restrictions due to school schedules, and rebelling against parental guidelines. For these reasons, it is important to consider nutritional support from sports nutrition mainly regarding energy and protein supply. Additionally, but depending on general nutrition and specific situations, it may be prudent to evaluate specific micronutrient supplementation (e.g. vitamin D and/or calcium). As a result, basic sport nutritional recommendations for adults can be likewise adopted for both kids and adolescents: - i.e. using carbohydrate-electrolyte-solutions during physical activities lasting more than one hour, taking carbohydrate-protein recovery drinks immediately after exercise, and providing energy bars or normal easily digestible, carbohydrate-containing snacks throughout the day, particularly prior to energy-demanding activities. Otherwise, kids can often be less committed to their sport or distracted by other activities, and consequently less focused on fulfilling the necessary dietary requirements for their own good.

As a side note, but worthy of particular attention in kids, is tooth health. Sugars and acids are cariogenic and impair tooth health, if not taken care of. Steadily sipping and drinking sugars and acid-containing drinks or juices is particularly disadvantageous. Counter-measures could include the use of acid-free sports drinks, or at least frequent mouth-swilling with water and the use of sugar-free chewing gums until proper tooth-brushing takes place.

The otherwise indiscriminate use of more specific, ergogenic supplements such as caffeine, creatine, beta-alanine, or applying particular dietary measures such as carbo- or soda-loading, does not seem to be appropriate. Most such supplements and measures should be considered top-of-the-pyramid, i.e. not yet suitable for most adolescents and much less for kids. As long as technical skills and physical exercise are not fully optimised, any progress is predominantly dependent on such factors, rather than uncritical use of ergogenic supplements, which do not add to performance to any extent that could justify its use.

In conclusion, general guidelines and specific recommendations for kids and adolescents may be as follows:

Hydration: Thirst should always be the main driver of fluid intake. However, kids should be surveyed and helped as they tend to forget about adopting a proper drinking routine due to excitement about their current activity, distraction and a generally less strict behaviour than adults have. The best advice is acid-free sports drinks, whenever energy needs have to be covered as well, otherwise water or sugar-free effervescent tablets for better compliance (taste preference) will suffice.

Even pure maltodextrin could serve as an energy add-on in self-brewed tea water.

Energy: Other than sports drinks, energy bars also serve a purpose in providing easily digestible energy very well. They can be used before, during and after exercise, as they can be conveniently taken along to any event and occasion. Also, carbohydrate gels could serve this aim to some extent, but should be reserved for competitive situations.

Protein: Proper growth and bone health are crucial to kids and adolescents, and fast recovery depends on muscle protein synthesis and coverage of energy demands. In consequence, protein intake should be taken with particular care as well. One can adhere to the rule of thumb of 1.5-2.0 g protein required per kg of body weight daily. Preferably one portion, along with 30-50 g of carbohydrates, should be taken within half an hour after exercise. Furthermore, 20-30 g of protein should be ingested every

3-5 hours. Such dietary goals can be fulfilled with either protein-only products from or with protein-carbohydrates in beverages, bars, or ready-to-drink bottles.

Caffeine/creatine: Whereas recent evidence does not demonstrate concerns against caffeine use by kids and adolescents in general, it seems exaggerated to apply it for the above-mentioned reasons. In contrast, the use of creatine is clearly discouraged as long as the individual's growing stage is not finished. It may otherwise cause muscular imbalances or even injuries due to unbalanced strength and structural stability in kids and adolescents (bones, tendons, cartilage) since growth of the various tissues is not linear.

Carboload/recovery: Targeted carboload may be considered in competitive situations prior to extended endurance activities, or as temporary measures in cases of energy shortage or increased energy-demanding situations, such as in training camps, or in order to increase weight gain and growth rate. The implementation of e.g. 1 g of maltodextrin per kg of bodyweight 2-4 times (!) daily over a certain period may help to cover increased energy needs, which would otherwise be difficult to achieve with a normal diet.

As a final remark, it should be noted that any dietary measure is only as good as the compliance with it! In this respect, it is more important to find and apply measures and products, which are liked and appreciated, rather than to stick to a fixed nutrient-dependent approach. If something is taken only hesitatingly, compliance will fail sooner or later. Try to find food and supplements that are liked, and adopt them in a dietary routine which is followed gladly and freely, and find enough alternatives to allow for variety.

Chocolate Milk Has Muscle

Chocolate milk is the perfect balance of vitamins, minerals, carbohydrates and protein — a combination that can't be found in any other beverage.



Source: U.S. Department of Agriculture Nutrient Analysis, % of Daily Values are based on a 2,000 calorie diet and 8 ounce servings.

© 2014 Wisconsin Milk Marketing Board, Inc.



The Ultimate Solution for Renewable Energy

Renewable energy has been in the headlines for quite a while. It has been hailed as the grail for stopping global warming. In drumming up support for renewable energy, one major issue has been overlooked or deliberately left out, namely **continuity**. If the renewable energy is derived from sunlight then we have plenty of it during daytime, but none at night. If it comes from wind energy, then we have plenty of it when a gentle breeze blows, but the rotors of the wind turbines have to stand still when there is no wind or during violent storms. Add to these fluctuations the frequent dips and peaks in demand, whether anticipated or sudden, which force utilities to have on standby the equivalent capacity of conventional generating plant available to kick in should the renewable sources fail to cover the load. The mostly idle installed backup capacity is a huge financial burden, which often discourages additional investments in renewable energy generation.

Matching Supply to Demand

In order to prevent blackouts, the generated power supply must match the demand at all times. In a large utility network, the power frequency is the *indicator* used to switch in or switch out generating plant. On this side of the Atlantic 50 Hertz and on the other side 60 Hertz (1 Hertz = 1 cycle per second) are the frequencies used. If the sun is shining and people are enjoying fresh air outdoors, demand drops, so the frequency races above the set limit and the utility quickly switches off generating plant. However, when there is a World Cup football match, everyone would be watching television and demand would soar, so the frequency of the power network starts to drop below the set limit and more generating plant has to be switched on.

The above method may sound sensible and easy, but in practice it is hugely difficult and complicated. A generating plant can't be switched off and on so easily. In fact 'Base Load' plants are designed to run all the time at full load. They are switched off only for maintenance. A thermal power station whether coal or gas fired takes sometimes 24 hours to start. Similarly nuclear power stations take even longer to come on line.

The so called peaking power plant is used to smooth out sudden peaks in demand and match supply to demand. They are usually gas turbine-driven stations which can start in a matter of minutes.

The only other conventional way of handling peaks in demand and storing surplus energy is the well known pumped water method. Water is pumped up when there is excess energy and let down to generate electricity when demand exceeds supply. However, the efficiency of pumped water schemes is only 80% at best. Additionally they are only feasible if the topology is suitable, i.e. having two lakes at sufficiently different elevations and plenty of water. Mountainous Switzerland is ideal for pumped water plants and the IMCZ visited one major station in Grimsel. (see IMCZ Gallery).

Power Batteries

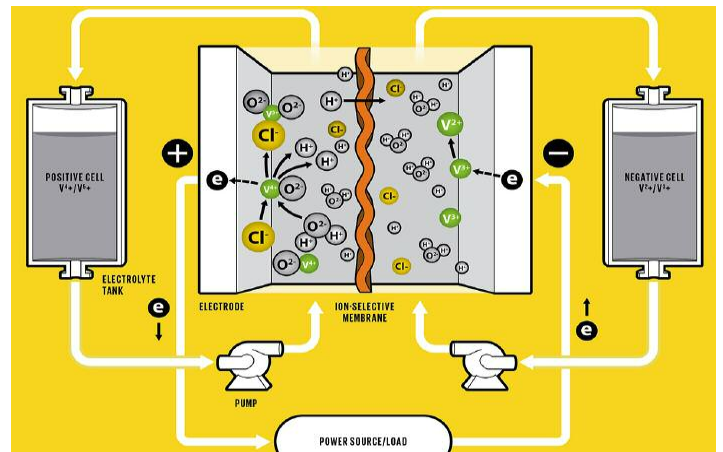
In theory, the ideal solution would be to have an electric battery connected on line to the utility network. It's capacity would need to be high enough to store excess energy instantly and deliver energy when needed also instantly. There would be no need to switch on and off elaborate generating plant any more. The idea is of course not new, but there has been no battery yet which can store the huge amounts of energy required and deliver the stored energy to the network at high enough power. Lithium-ion batteries similar to those used in Tesla cars are hugely expensive, are an intrinsic fire hazard, and have a relatively short working span of maximum ten years.

Flow versus Electrode Batteries

Most batteries, which all of us have come across, store the electric charge in the electrodes, the electrolyte in between serves merely to allow movement of the ions during charging and discharging times. Such batteries are intrinsically unsuitable for utility grade applications, where Megawatt-Hours of energy have to be stored and taken out at power rates of Megawatts at all times.

Flow batteries on the other hand do not store the energy on the electrodes

Contributed by IMCZ honorary member and Newsletter Editor Muthana Kubba



but in the electrolyte itself. Basically there is one electrolyte tank for the positively charged ions and another for the negatively charged ones. The key issue with flow batteries is that the amount of energy stored depends on the size of electrolytic tanks and the charge/discharge rate of energy, i.e. power, depends on the size of the electrodes and the membrane separating them. With this in mind, it is possible to scale up both the amount of energy storage and power as required.

Vanadium-redox Flow Batteries

Vanadium is a long cry from Lithium. It is an abundant silvery-grey metal related to Niobium and Tantalum. It is mined mainly in China, Brazil, Russia and South Africa. The Chemistry is such that the membrane selectively allows Vanadium ions to pass through. During charging the applied voltage rips off electrons from Vanadium on the positive side and stores them on Vanadium ions on the negative side. The opposite happens during discharge. Since the Vanadium is in an electrolyte solution, it is pumped out and recycled. The amount of energy stored depends therefore on the volume of the electrolyte.

The Chemistry

The word redox is an acronym from 'reduction oxidation reaction' and refers to a chemical reaction in which oxidation states of atoms are changed. The Vanadium-redox rechargeable battery uses Vanadium oxides which can exist in solution in four different oxidation states. The membrane separating the two sides is a proton-exchange membrane. Simply put, during charging electrons are stripped off the V4 and V5 ions and they pass through the membrane to the negative side becoming V2 and V3. During discharge the opposite takes place. The potential of one cell is 1.41 volts, and many cells have to be stacked up in series to raise the voltage to the required level. Of course all the stacked cells can be fed from the same tanks containing the electrolytes.

Conclusion

If the plants under construction now live up to their expectations over a sufficiently long period of time, then we can anticipate that renewable energy will slowly replace conventional fossil fuel based energy generation. Utilities the world over, will no longer worry about standby installed capacity, the Vanadium-redox battery itself would be the required standby.

Further reading

1. IEEE Spectrum 11/17 The Vanadium Redox-Flow Battery
2. https://en.wikipedia.org/wiki/Vanadium_redox_battery



This factory produces vanadium redox-flow batteries destined for the world's largest battery site: a 200-megawatt, 800-megawatt-hour storage station in China's Liaoning province.



Sicily, the largest Mediterranean Island

Contributed by IMCZ member Nico Lo Cascio

At almost 26'000 square kilometres, Sicily is more than half the size of Switzerland. It is located at the southern western tip of the Italian peninsular. At the easternmost tip, it is separated from mainland Italy by the narrow straits of Messina. At its narrowest, is the site of a long planned but never built three-Kilometre-long suspension bridge connecting it with Mainland Italy. 300 km westwards at the western tip, the North African coast is only 150 km away.



Sicily, where I was born, has a long and interesting history. As early as 750 BC, Sicily had Phoenician and Greek colonies, but thereafter was plagued for the next 600 years by the Sicilian and Punic wars. After the fall of the Roman Empire in the 5th century AD, it was ruled during the early Middle Ages by the Vandals, the Ostrogoths, the Byzantine Empire and the Emirate of Sicily. In the late Middle Ages, it was ruled, among others, by the House of Habsburg. It became part of Italy in 1860 and was then given a special status as an autonomous region in 1946.



Nowadays more than 5 million people inhabit the island. It has 6 provinces and 3 metropolitan cities. The capital, Palermo, was founded in the 8th century BC by the Phoenicians. Today, Palermo, with its 673,735 inhabitants, is Italy's fifth largest city and the political and cultural center of Sicily.

Palermo is also a major touristic destination. Within easy reach are the famous temples of Agrigento, the small islands Stromboli, Lipari and Panarea, the impressive cathedral of Monreale and picturesque old villages as Cefalù, Taormina and many other sites of historic interest or natural beauty. Last but not least, is the only active volcano in Europe, sitting on top of 3329 metres high Mount Etna.

Sicily's traditional cuisine is appreciated worldwide. Fish and seafood, sun ripe fruit and vegetables, pasta with wild fennel, anchovy and pine nuts, delicious pastries and of course the famous gelati invite the guest to sit down and enjoy the food in one of the many restaurants.

You will soon appreciate that in spite of being part of Italy, Sicily is quite distinct in its own right with its own food specialities, habits, yes even the language. Sicilian is a distinct Romance language and is spoken widely to this day. Most Sicilians speak both Sicilian and Italian.





Investment Commentary And Outlook January 2018

Contributed by IMCZ member Christian Wagner

ECONOMY

The recently passed US tax reform is supposed to raise economic growth from roughly 2% over the past decade to over 3% medium-term. Maybe, but the relief for companies by a reduction of the tax rate from 35% to 21% is merely cosmetic. The S&P500 companies only pay approx. 25% nowadays. Moreover, almost all tax relief measures for individuals expire before 2025. Europe is in for trouble: Germany is in danger of overheating; the other Euro-zone countries are stuck at sub-par growth.



BOND MARKETS

The US central bank has raised its reference interest rate and does not assume that the tax reform will alter its normalization policy. However, the markets are not likely to be unperturbed by the additional USD 1.45 trillion which will be added to the already high budget deficit until 2027. In view of the imbalances in growth within the Euro-zone and the higher supply of government debt (roughly EUR 300 billion less purchases by the ECB), turbulences are to be expected.

EQUITY MARKETS

It is pointless to list all the well-known dangers to the equity markets, but important to emphasize the fact that they are increasing and becoming more dangerous. The investor should focus on risk, not return. Caution is recommended with investment products which depict either markets or market sectors (ETFs and index funds). Individual equities of companies with a proven long-term earnings track record in promising industries are preferred. A review of the portfolio with regard to possible price risks is appropriate.

CURRENCIES

Fundamental economic data are becoming more important for currency markets. The USD should benefit most from simultaneous positive factors. Better economic growth and a larger interest rate differential versus the other major currencies provide the cornerstones for basic strength. The GBP benefits from the monetary policy of the Bank of England and less fears concerning Brexit. The EUR is vulnerable to disappointments regarding economic growth.

FOOD FOR THOUGHT

Good economic growth, negligible inflation and record low interest rates. What more could the investor want? Most asset managers are fully invested with an overweight in equities. An overweight in equities seems appropriate, being fully invested is not. Nothing against free climbing

but belayed mountaineering is certainly less dangerous. A safety net of 30% cash protects against unforeseen events and can be used should opportunities arise. A precious metals position of 10% reduces risk as well. Equities are the most attractive asset class and warrant 60% of total assets.

INAUGURAL CLUB RACE DAY – MARCH 16, 2018

ANDERMATT

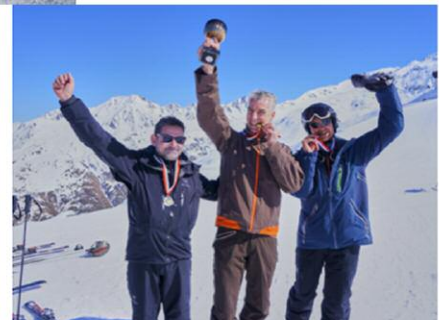


- Experience the thrill of ski racing
- Ability to ski a steep blue slope is the minimum requirement
- Cost CHF 149 per person, includes ski pass, reservation of race course, operation and set up, awesome prizes and more.
- Registrations close 28 February

To reserve your place and for more information, please contact Peter at Alpine Sports Andermatt: peter@alpinesportsandermatt.com

Accommodation options are available upon request

Race training and coaching is available early March with access to gates on Friday 2 & 9 March.



Legal Implications of Cryptocurrencies

Contributed by IMCZ member Dr. Rainer Riek, attorney-at-law and Civil Law Notary in Zug

Introduction

Within the last few months, cryptocurrencies became quite popular and in particular the most common cryptocurrency “Bitcoin”. There are more than 2’000 different cryptocurrencies and the number is growing. The value of Bitcoin went through the roof since beginning of 2017. However, and probably because of restrictions in countries such as China, the value decreased quite considerably at the beginning of 2018. So, what are the legal implications of cryptocurrencies?

This article is based mainly on a seminar of the International Alliance of Practising Lawyers (www.iapl.org) held in Zug beginning of November 2017. The IAPL is an international law association, with its official seat in Zug. Dr. Rainer Riek is its acting Secretary and organised the event with Mr. Niten Chauhan, a friend and fellow, lawyer who is a partner of a well-known law firm in London (www.jpclaw.co.uk). Some of the members of the IMCZ participated in the said seminar.

For those who have not yet gone much into the details of how cryptocurrencies work, here is an explanation of the technology behind it, the blockchain. Those who already know more may skip this paragraph and go directly to letter C).

A) Blockchain Technology

Whilst Blockchain can best be described as a digital platform or database for securely storing information and recording transactions, there are some key points to be aware of:

Firstly, there is no single or definitive ‘blockchain’. In fact, there can be an infinite number of blockchains and anyone with the necessary coding skills can create one.

Each record (or ‘block’) contains details of a transaction and is time-stamped and associated with certain data that links it to the previous ‘block’ in the chain. When a new transaction takes place, it is authenticated across the network by users known as ‘miners’ (using specialised IT equipment) before being recorded as a new ‘block’ and being made available for viewing by other members of the blockchain.

Blockchains can be:

- ‘public’, for example, where used for trading shares; or
- ‘private’, for example, a real estate company’s blockchain that stores title documents of properties.
- permissionless or unpermissioned, which allows anyone to contribute data with all participants possessing an identical copy of the ledger; or
- permissioned or private, which allows only specified people (e.g. banks, approved individuals etc.) to submit transactions and/or validate them across the network.

B) CRYPTOCURRENCIES

Cryptocurrency is a form of digital money that is designed to be secure and, in many cases, anonymous. It is a currency associated with the internet that uses cryptography, the process of converting legible information into an almost uncrackable code, to track purchases and transfers.



Cryptocurrencies work by using decentralised technology to let users make secure payments and store money without the need to use their name or go through a bank. That is why you often hear “kill the middleman” (i.e. the bank) since such middlemen are not necessary anymore. Cryptocurrencies run on a distributed blockchain public ledger which is a record of all transactions updated and held by currency holders.

C) Illegal Activities, Crypto Theft & Security

Cryptocurrencies have many benefits. They are known for being secure and providing a level of anonymity. Transactions in them cannot be faked or reversed and there tend to be low fees, making them more reliable than conventional currency.

Because of the level of anonymity they offer, cryptocurrencies are often associated with criminal activity, particularly on the dark web, such as drug deals and other illegal purchases.

However, the greater threat is from having your private key (essentially your crypto wallet) hacked. This is an issue of personal security, not blockchain security. Stolen Bitcoins are nearly impossible to recover, as transactions submitted with stolen keys appear to a verifying node to be indistinguishable from legitimate transactions.

Currently the solution seems to be one of prevention rather than recourse, as it’s nearly impossible to recover stolen Bitcoins. This seems to be the downside of not having an intermediary, such as a bank, that’s capable of providing a remedy. If cryptocurrencies are to flourish, a remedy for having one’s funds stolen is needed and would require the cooperation of lawyers and cyber security firms; the former providing the legal mechanism for a remedy while the latter provides the technical tools to track and retrieve the stolen funds.

However, there are still many legal challenges ahead. For example, whilst there are a number of legal theories as to how blockchain-enabled

assets, such as Bitcoin, will be recovered if they are stolen e.g. claims for unjust enrichment, none of these have yet been tested in the courts. When that happens, some big questions will need to be answered, in particular, whether such assets constitute ‘property’ capable of being ‘owned’.

D) Legal Implications

Zug as a leader accepting cryptocurrencies

First of all, there is no specific law in Switzerland about cryptocurrency, blockchain or whatever. Of course, there are a lot of regulations, when it comes to real values, such as real currencies, commodities, etc. Some of those laws may be or already are also applicable to cryptocurrencies, for instance when it comes to tax issues.

As with any development, it seems likely that legal issues will be resolved in line with existing laws, principles and guidance. However, it’s no secret that laws can quickly fall out of date, so it’s almost inevitable that laws will need to be adapted, or that entirely new laws will need to be implemented, to cater for blockchain.

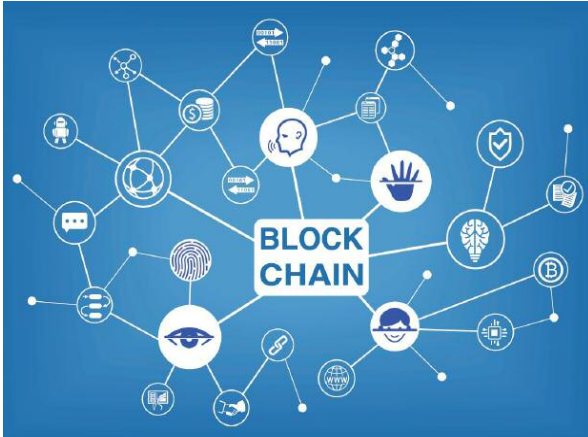
Since cryptocurrencies have a certain value and you can buy them with “real” money, they are assets that tax authorities ask to be declared in tax documents. The canton of Zug has just recently published a bulletin on how to declare virtual assets. Please find it under the following link: <https://www.zg.ch/behoerden/finanzdirektion/steuerverwaltung/kryptowaehrungen> (still only available in German).

Zug, as the world’s leading hub of blockchain technology (the so-called “Crypto Valley”), was the first city accepting Bitcoin as a currency to pay certain fees with the registration office. Last year the Commercial Register allowed payments in Bitcoin and other cryptocurrencies as well. The Commercial Register even went a step further and accepts the incorporation and registration of a company with cryptocurrencies. This means that you do not need to go to the bank to open a bank account in order to incorporate an AG (minimum capital - CHF 50,000) or a GmbH/LLC (minimum capital - CHF 20,000), but you can contribute the capital with the following virtual currencies: Bitcoins, Bitcoin Cash and Ethereum (others may be accepted shortly).

a. Blockchain-based Land Registry in the UK

Niten Chauhan from www.jpclaw.co.uk, who is a member of the Board of www.iapl.org, has a particular specialism in property law and has been closely following the exciting application of a blockchain-based land registry system in the UK.

The current system of selling properties involves a very lengthy and inefficient process. Fraud is also currently very widespread in



concepts and principles that require a degree of subjectivity or judgement on a case-by-case basis? How about capturing a non-exhaustive list of circumstances, such as force majeure events?

Even if that is possible, how will smart contracts cope with events that occur outside their underlying code (in the 'real world')? If, for example, circumstances arise that would frustrate a contract or make its performance illegal or even

contrary to business common sense, is it possible to hardwire that into the code of the smart contract, so that it does not automatically perform itself in those circumstances?

It's also crucial to note that some transactions, for example relating to the transfer of land, need to be in writing, which does not currently include computer code.

c. Liability & Responsibility

Re the legal enforceability of smart contracts – we consider the wholesale adoption of the phrase to be unhelpful, as the term 'contract' invites the traditionally associated concepts such as offer and acceptance, certainty and consideration, which are unlikely to be relevant to many coded programs. Furthermore, the potential for anonymity on some distributed ledgers may complicate anti-money laundering compliance and taxation regulation, while consumer protection laws will need to be revised just as they were to accommodate the rise of e-commerce.

If no business entity has been formed to 'host' a blockchain system, would the blockchain operators and/or participants have unlimited freedom and no liability?

Who do you then claim against and what is claimed in the case of a legal dispute?

Who will be responsible for defects in a blockchain system?

For now these questions remain unanswered and the legal landscape will develop over time.

d. Data Protection

Any blockchain system that holds personal data will need to comply with applicable data protection laws. The distributed nature of blockchain causes concern here. Which data protection laws will apply? In reality, there may be a need to comply with the laws of numerous different territories in relation to personal data held on the blockchain in question.

What mechanisms will be put in place to ensure that any cross-border transfers of data are compliant?

The new General Data Protection Regulation will formalise an obligation on data processors

to pseudonymise data and a right for data subjects to request erasure of their personal data (the 'right to be forgotten'). While pseudonymisation tends to go hand in hand with data stored on a blockchain, the right to be forgotten presents more of a challenge in light of the fact that records on a blockchain strictly cannot be altered.

Clearly, creating huge data repositories on a blockchain gives rise to the potential for security breaches. Blockchain operators will need to take cybersecurity particularly seriously to avoid potential regulatory action and – not to be underestimated – reputational damage.

e. Litigation and dispute resolution

Players in a blockchain system will – by definition – be 'distributed' and are likely to be spread around the globe. In practice, it would seem advisable for parties to define the applicable law and jurisdiction in advance. Over time, we may see blockchain-based service providers requiring customers to sign up to governing law and jurisdiction in the same way as for websites, i.e. via 'terms of use'. In the case of a private blockchain, users could be required to sign up to specific terms of service before being granted access to the blockchain solution in question.

E) CONCLUSIONS

It is likely that, as the technology develops, new laws will need to be passed to ensure the proper regulation of blockchains, in particular cryptocurrencies, but also the execution of smart contracts. In turn, we are excited by the opportunities presented by Blockchain technology.

In case of questions, please feel free to contact our member, Dr. Rainer Riek (r.riek@zwplaw.ch), who is not only specialised in road traffic law but acts as Public Notary for clients, incorporating companies over the whole of Switzerland. With his network of lawyers around the world and in particular with Niten Chauhan (Chauhan@jpclaw.co.uk), he is well prepared to address international questions in this regard and the legal framework for such technological advancements in the future, also globally.

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this area. In 2014 the Land Registry received more than £23.3 million in claims, almost £10 million of which were related specifically to fraud and forgery.

Blockchain has been touted as the future of land registries due to the myriad of benefits it offers. Firstly, it has the potential to greatly reduce property fraud at a time when this has become a growing concern for HM Land Registry. Each property would be uniquely coded and linked to a smart key which would be held only by the owner, i.e. digital signatures and possibly even biometric identification may be used to reduce the risk of fraud.

With 'smart contracts', transactions could complete much more quickly when combined with a blockchain registry. For instance, title to the property could be transferred to the purchaser automatically on receipt of funds into the vendor's account. The result would also be to speed up the registration process.

With the ledger updating immediately, the registration gap would be eliminated. This, in turn, would also lead to greater efficiencies and cost savings for land registries.

As a result, in the UK, HM Land Registry plans to test a live 'Digital Street', which will allow property transactions to take place almost instantaneously. This is all part of the UK government's commitment to make HM Land Registry the "world's leading land registry for speed, simplicity and an open approach to data".

b. Smart contracts

There is no universally established and accepted definition of a smart contract, but in essence they are coded instructions that self-perform when certain criteria are met.

The relevant computer code is uploaded to a ledger, in place of more basic passive data entries. A simple example might be a smart contract-enabled insurance policy that automatically pays out to a policyholder on the occurrence of an insured event. Smart contracts often use blockchain technology to record and execute transactions.

Will it be possible to capture all the elements of a 'traditional' contract in a set of computer-coded instructions? How will coders capture

brunni: The sunny side of Engelberg

Contributed by IMCZ Sports' editor Joseph Dow



In my ten years living in Switzerland with many trips to Engelberg, I realized I had never skied the Brunni area (*not to be confused with the Brunni-Alpthal ski area near the Mythen*) on the opposite side of town from the Titlis area. As they say, it's the sunny side of Engelberg, so I never thought there would be enough snow with its south facing aspect. This year, some early season accumulation convinced me to give Brunni a try.

Brunni is a small but very pleasant ski area reached via an aerial tram that soars over the Klostermatte beginner area in the valley below with the magnificent 2606m Hahnen mountain flanking its slopes. The terrain consists basically of four runs: two off the triple chair and two off the upper drag lift. Under the chair, lies a wonderful little red on which I could spend an entire day. It has so many contours and with no one else around and new snow, it's like skiing down on a huge pile of pillows. The blue run is reached via a traverse and is a straight shot down the hill with a bit more steepness than the usual beginner run. In addition, there are a couple of sledging runs and a yellow ungroomed valley run (*only open when sufficient snow*) from Ristis to Waldegg, just above town.

The upper portion of the area is accessed using a surface lift billed as the steepest drag lift in Switzerland with a 48% average incline, rising up to Schonegg at 2057m. I think the sign was intended to scare away the many beginners, who come to Brunni, to avoid them finding trouble on the steeper slopes. The lift itself does not seem to deserve the fearful warning and is tame compared to that nasty T-bar from Lutersee off the side of the Gemstock in Andermatt. Down the front face, next to the drag lift, is a narrow winding red piste, but the real attraction is the surprisingly steep black slope around the corner from the top of the lift. There is beautiful scenery all over Brunni, but the view from the top of the Schonegg run is spectacular with fantastic views of the Hahnen, the village of Engelberg, and the Titlis massif.

For on mountain food, I'd recommend the Swiss Alpine Club's Brunnihütte, high up on the mountain in the middle of the ski area between the top of the chairlift and the bottom of the drag lift. The food is good quality, very tasty, and relatively reasonable in price. I had the large portion of chicken nuggets (*made with real chicken*) & fries, a large coffee and a homemade cookie for just over 20 CHF. The Rösti with egg also looked very good and was a sizeable portion for the skiing farmers amongst us!

So, if the season has seen lots of snow, Brunni is a real treat before it melts.

Statistics:

Vertical Drop: Schonegg 2057m to Ristis 1601m (*not including the yellow ungroomed valley run below to Waldegg*)

Runs: 4 plus the yellow valley run, the beginner area down below at Klostermatte and the sledge runs

Lifts: Aerial Tram, 3-seat chairlift, upper drag lift and drag lifts down at Klostermatte

Additional Information:

- Brunni-Bahnen Engelberg: brunni.ch
- Brunnihütte SAC: brunnihuette.ch
- Engelberg Information (Brunni): engelberg.ch/bergbahnen/brunni
- Brunni Weather: brunni.ch/en/current-information/weather

THINK SNOW!!!

If you have questions about skiwear or equipment or want a recommendation, feel free to send me an email: [jjdow\[at\]hotmail.com](mailto:jjdow[at]hotmail.com).



A Refrigerator

One morning at a doctor's clinic a patient arrives complaining of serious back pain. The doctor examines him and asks him: "Tell me what happened to your back...?"

The patient replies: "Sir, I work for a local night club. This morning I went to my apartment early and heard some noise in my bedroom. On entering I knew someone had been with my wife and the balcony door was open.

I rushed out of the balcony door and did not find anyone. As I looked down from the balcony I saw a man running out and he was dressing himself.

I was very angry. I grabbed the fridge and threw it at him. It was very heavy...

That is how I strained my back.

Later that day, a second patient arrives as if he has been in a car wreck. The doctor said: "My previous patient looked bad ... but you look terrible ... What the hell happened to you?"

He replied: "You know I have been unemployed for a while now. Today was the first day at my new job... I forgot to set my alarm and I was late... I was running out of the building, getting dressed at the same time. And you won't believe it but I was hit by a fridge. I don't know how and from where, but it fell on me...!!!!"

Before closing hours, the third patient comes in. He looks like he was punished in hell. The doctor is shocked. He asks: "What the hell happened to you...?"

The patient replies: "Well, It started like this, I was IN A FRIDGE minding my own business..."



The Secret to a Happy Marriage

A traveller once visited a small village in the countryside.

At the local bar, someone asked him if he was married.

"I'm divorced, actually. Never could find a woman I didn't end up fighting with all the time," he replied.

The local man said: "Then you should go and talk to the old couple that lives on the hill outside the village. Rumour has it that they've been married over 60 years and they've never fought!"

What?? That's impossible! Everyone has fights!" Exclaimed the traveller. But the local swore to him it was the truth and nothing but.

The traveller just had to check it out, and in the morning he knocked on the door of the little house on the hill and was immediately welcomed by the husband, who invited him in for tea. After the traveller explained why he came to see him, the man smiled and nodded.

"It's true. We never fight."

"Please," begged the traveller, "can you tell me your secret?"

"Well," said the old man, "it all started about 60 years ago, right after the wedding. We were riding our mule back to town and walking it down the street when it tripped over a stone and my wife said to him: 'That's one.'

"We kept riding and he tripped again on another stone, which made my wife immediately say: 'That's two.'

"Two minutes later, the mule trips over a stone again. My wife said: 'That's three.' She pulled out a gun I never knew she had and shot it in the head without thinking twice! I was shocked and yelled at her: 'What the heck do you think you're doing? We needed that mule! Are you crazy?!'

"My wife looked me straight in the eye and said: 'That's one.' 'And we haven't had a fight since.'"



Car won't start

Wife on the phone with her husband, 'I don't know what to do.

It is so cold and the car won't start. And now the dashboard is showing a picture of a man taking a shit. You have to come quickly'.

Husband: 'What? Impossible. Can you send me a picture?'

Wife: 'Sure, here it goes:



Soaking Wet

A German tourist jumped into freezing water and saved my precious little dog. Once back on the pier, he checked my puppy out and told me, "Ze dog is ok. He vill be fine."

Due to his selfless heroic act, I asked, "I don't know how to thank you for saving my dog. Are you a vet?"

He replied, "Vet?, no I'm soaking!!"



Having an Affair

A married man was having an affair with his secretary.

One day, their passions overcame them and they took off to her place. Exhausted from the afternoon's shenanigans, they fell asleep and woke up at around 10 pm.

As the man threw on his clothes, he asked his secretary to take his shoes outside and rub them through the grass and dirt.

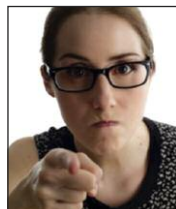
Mystified, she complied nonetheless. He proceeded to slip his shoes on and drove home.

"Where have you been?" demanded his wife when he entered the house.

Darling," replied the man, "I can't lie to you.

I've been having an affair with my secretary. I fell asleep in her bed and didn't wake up until now.

The wife glanced down at his shoes and shouted: "You liar! You've been playing golf!"



Stray Balls

Two women were playing golf. One teed off and watched with horror as her ball headed directly towards a foursome of men playing the next hole. The ball hit one of them and he immediately fell to the ground clutching his hands together to his groin, rolling around in obvious agony.

The woman rushed over and immediately began to apologize.

"Please allow me to help, I'm a physiotherapist and I know I could relieve your pain if you'll allow me" she told him.

Oh no I'll be all right, I'll be fine in a few minutes" the man grunted, still lying in a fetal position, still clasping his hands at his groin.

"Don't be silly, Let me help!"

she told him and, following her persistence, he finally allowed her to help. She gently took his hands away and laid them

at his sides, she loosened his trousers and put her hand inside. She administered tender and skilful massage for several long moments and then asked "How does that feel?"

He replied, "It feels terrific, but my thumb still hurts like hell."





Members' Marketplace

Are you **selling** your yacht (harboured in Piraeus)?
 Your Aston-Martin old-timer with the roll top roof?
 A gorgeous view of the Bay of Biscay,
 with a little bit of house attached?
 Or are you **cashing in** the half of your stamp
 collection that is finally worth something?
 Perhaps you're **looking** for all of these things?

Then ADVERTISE here, in the IMCZ News;

The Members' Marketplace is reserved for unformatted advertisements of 150 characters (approx. 3 lines) of text. These are free of charge to IMCZ members. Advertisements must be submitted as illustrated below. Longer advertisements cost CHF 30.-

Example: FOR SALE: gorgeous view of Bay of Biscay with stunning sunsets and high waves. Wee house (12 rooms), dock and yacht included. Call Bill at 041 123 45 67.

Do you like writing? I wrote a book in German about a Swiss expat and am now looking for someone to translate it into English. The text is easy. Call Christian on 041 710 40 12.

IMCZNEWS Advertising Rates

The IMCZ newsletter is delivered bi-monthly to about 200 members representing 20 nationalities. IMCZ members have personal or professional interests in both the international community and in the canton of Zug.

Format: A4 vertical, full color.

Ad content delivery:

electronic by e-mail, .pdf, .jpg, .gif

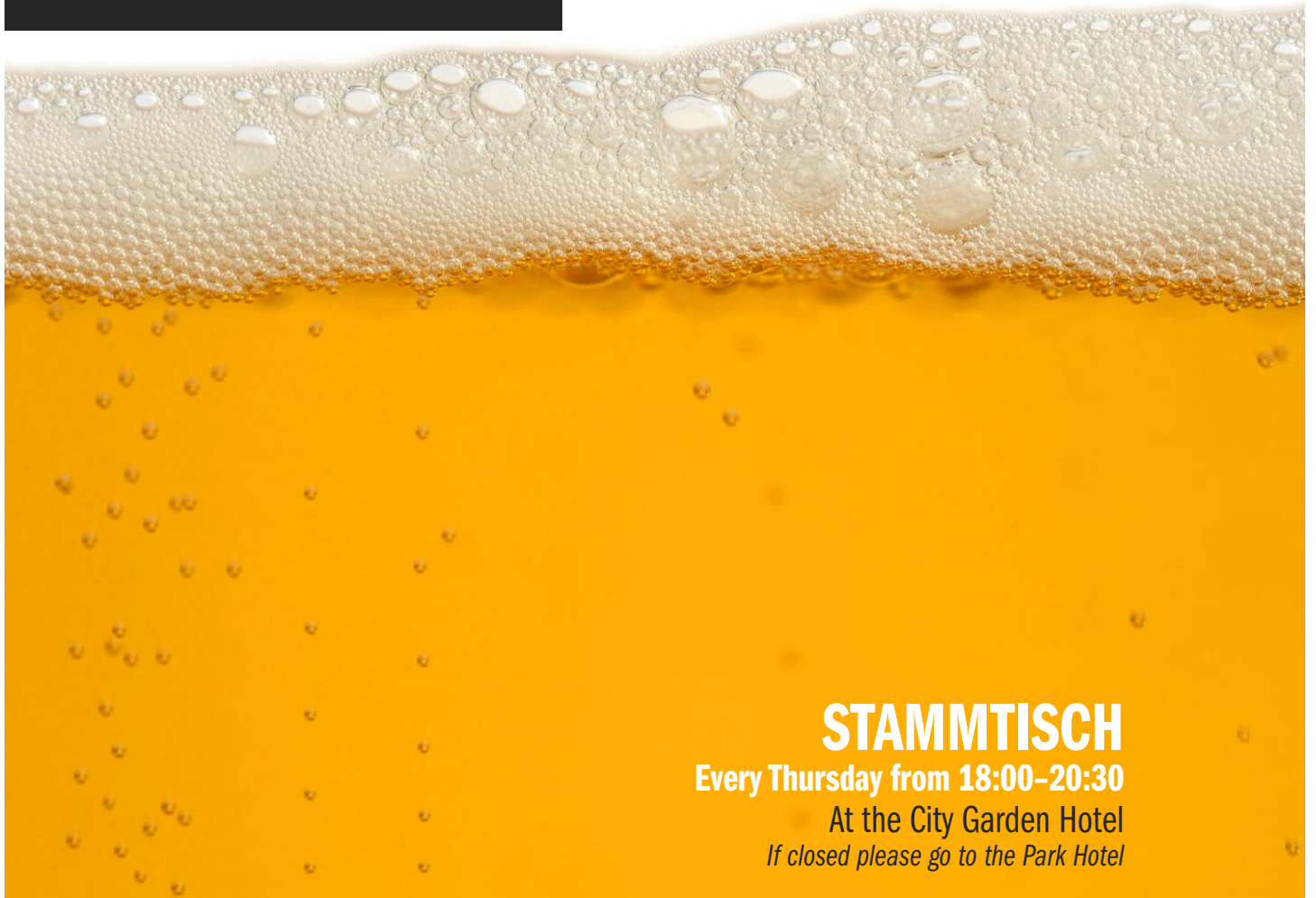
Advertising Rates:

- Full page, A4 vertical. (19 x 27.7 cm), Fr. 200.-
- 1/2 Page, A5 horizontal (19 x 13.5 cm), Fr. 110.-
- 1/3 Page, vertical (6.3 x 27.7 cm), Fr. 85.-
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- 1/4 Page, horizontal (19 x 6.9 cm), Fr. 60.-
- Business Card (9.2 x 6.45 cm) Fr. 45.-



Extra costs may be incurred for typesetting, special formatting, etc. IMCZ Members receive a 20% discount on advertisement costs.

Place your ad for an extended period and receive a discount: get seven months of advertising for six months paid, or receive twelve months for the price of ten.



STAMMTISCH

Every Thursday from 18:00-20:30

At the City Garden Hotel

If closed please go to the Park Hotel