



7 ci fgY`Cj Yfj ]Yk

`GHUZZ`7 cbhUW`i8YHU]`g`

`7 cbj Ybcfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cWU]cb	D\cbY
8f`6Yb`D\]ddg	V"d\]ddg4 i bgk "YXi "Ui	7 cbhUW]j ]U`Ya U]`hc UffUb[ Y`U Wcbgi `hU]cb`hja Y"	b#U	b#U

GWXcc`7 cbhUW`i`bZcfa U]cb

Fcca " %&Z`Yj Y`" `F cVYfhK YVghYf`6i ]X]b[

D\cbY. f\$&L`- ' , ) ( , ) \*

9a U]: [gUa 4 i bgk "YXi "Ui](#)

K YVg]hY: [\hfdg.#gUa "Ufmg"i bgk "YXi "Ui](#)

H\Y`GWXcc`cZ`hY`5fmg`UbX`A`YX]U`k`ci`X`\_]`Y`hc`F`YgdYW`Z`m5W`bck`YX[`Y`h`Y`HfUX]`hcbU`7`i`g`hcX]Ubgz`h`Y`6YXY[`U`f`P`Ybg]b[`hcb`WJa`di`g`Lz`;`UX][`U`f`7`]m`UbX`5`f`h`/`8`Yg][`b`7`Ua`di`g`Yg`U`b`X`h`Y`B`[`i`bb`Uk`U`d`Y`cd`Y`f`5`i`g`f`U`]U`b`8`Y`Z`b`W`:`c`f`W`5`W`U`X`Y`a`m]b`7`U`b`V`Y`f`U`L`c`Z`h`Y`U`b`X`g`k`Y`f`Y`Y`U`W`W`Ja`di`g`c`Z`I`B`G`K`]`g`c`W`U`h`Y`X`"

7 ci fgY'8YHJ]`g

7 fYX]h'Dc]bHg '\*`

Gi a a UfmcZh\Y'7 ci fgY

Gi VYWh5fYU.'? ge[U


Xi fUhc" H\jg jg hY ZbU`UggYgga YbhUg\_"HYghdUdYfg:k j`VY`fYh fbYX:k Jh`a Uf\_g`UbX`Wca a Ybhg`Ug  
bYVW`ggUfm`

5 hYbXUbW F Yei ]fYa Ybhg

Gh XYbhg UfY ghfcb [ mYbWci fU[ YX hc UHhYbX U WUggYg UbX fYj ]Yk YW h fY fYWcfX]b[ g"

7 ci fgY GWXYXi Y

[J Yk WUgg hja YhUV Y](#)

Hja YhUV Y

8UhY	HmdY	7cbhYbh
K YY_% %* GYdhYa VYf! &\$ GYdhYa VYf		@% " bfcXi W]cb. Gh Xm]b [ / " ]ghYb]b[ hc k cfX a i g]W a i g]W gcWYm " 9hbc [ fUd\]WA YhcXg" A i g]WUbX \mVf]X]mž a i g]WUbX ]XYbh]m " C hYf WcbWdrg. W h fU fY U h j ]ga ž a i h]W h fU ]ga ž Wcga cdc ]hUb]ga ž ]bhYfW h fU ]ga ž gcWU Ž bW]cbž gY Ž ccX " Hi hc fU fYUX]b[ g k ] " VY Ubbci bW X ]b h Y YW h fYg  H% " 8 ]gW gg]cb cZa YhcXg / WcbWdrgž UbX ] fci d fYgYUfW dfc YWg " F YgYUfW dfc YW h [ fci d gY Ž gY YW]cb hc VY Ž bU ]nYX Vmghi XYbhg " 8 ]gW gg]cb cZ dchYbhU fYgYUfW dfc YWg "
K YY_& .& ' GYdhYa VYf! &+ GYdhYa VYf		@& " H Y ' 6 U W ' 5 hUb]W% - HfUX]hcbU " A i g]WZca ; \UbU / GYbY [ U " % " bfcXi W]cb hc K Ygh5Z]Wb a i g]Wg " ; \UbU]Ub hfUX]hcbg. 9k Y ; U\i / 8 U [ UUVU

C WtcVYf		X]gdcggYggYX'fZUXcŁ @]ghYb]b[ 'HYgh%" H) "'6f]YZfYdcfhcb'fYgYUfW' 'dfc[ fYgg"'8]gW'gg]cb'cZ 6'c[ ' ' @]ghYb]b[ 'tc'UbX'jXYbh]Zm]b[ 'ZUa YbVŁ f\m\A g'UbX'Zcfa g"
K YY_*. '&%C WtcVYf!'& C WtcVYf		F YUX]b[ 'K YY_
K YY_+. '& 'C WtcVYf!'% Bcj Ya VYf		@* "'H\Y'6'UW_5hUb]Wf7i VUŁ'H\Y'7i VUb'gcb VŁa d'Yi 'fgcbZ'a Ua Vcz]a VUŁ  h' "Gi Va ]gg]cb'fC W'i&, ž%%) ) da Ł'UbX'X]gW'gg]cb'cZ ( '\$!k cfX'fYgYUfW' 'UVghfUWg"5bU'mg]g'cZUXc'Zcfa " 8]gW'gg]cb'cZ6'c[ '(
K YY_'. '( 'Bcj Ya VYf!', Bcj Ya VYf		@+ "'H\Y'6'UW_5hUb]Wf6fUn]Ł7 UbXca V'YžgUa VU / 'fcd]W'jU  H+ "'DfUW]WU'k cf_g\cd. 'i bXYfg]UbX]b[ 'UbX'd'Um]b[ h'Y'gcb'UbX'fi a VU'WUj Y"
K YY_-. '%%Bcj Ya VYf! ) 'Bcj Ya VYf		@, "'H\Y'; cb[ '7\]a Yg'cZGci h'YUgh5g]U. 'H\Y ŁXcbYg]Ub [ Ua Y'Ub  H, "'i bXYfg]UbX]b[ 'UbX'd'Um]b[ 'gUa VU'VUhi W]XU f\m\A g"
K YY_%. '% 'Bcj Ya VYf! && 'Bcj Ya VYf		@]ghYb]b[ 'HYgh&'fXi f]b[ 'gW'YXi 'YX''YWi fY'h]a YŁ@ " H\Y'; cb[ '7\]a Yg'cZGci h'YUgh5g]U. 'H\Y ŁXcbYg]Ub [ Ua Y'Ub

# F Ygci fWg

## DfYgWf]VYX`F Ygci fWg`

DfYgWf]VYX`F Ygci fWg`H\YfY`jg`U`F Ygci fWg`gYWf]cb`]b`A ccX`Y`hUhWcbhU]bg`hY`Zc`ck ]b[ .`5`"F Ygci fWg`Zcf`a UbXUhcfmWci fgY`"ghYb]b[ `UbX`fYUX]b[ .`%"`F YUX]b[ `"]ghI`g]b[ `@Y[ Ubhc`"H\]g`YbUV`Yg`YUgmiUWwYgg`hc`U`"Wci fgY`a UHf]U`g`cb`UbmXYj ]Wz`hfcI [ \`U`g]b[ `Yz`]bh` ]hj`Y`i`gYf`]bhYfZUW`"&`@]ghYb]b[ `@]gh`"H\]g`YbUV`Yg`UWwYgg`hc`U`"5J`a`UHf]U`g`i`gYX`]b`hY`"YWi`fYg`""`"A`i`g]W;` `cggUfn`"H\]g`j`U`i`UV`Y`fYgci fWg`dfcj ]XYg`XYZ]b]hcbg`UbX`"b\_g`hc`c`hYf`fYgci fWg`gzk`YfY`Uddfcdf]UH`z`cZ`\_YmH`fa`g`UbX`WcbW`dHg`i`gYX`]b`hY`Wci fgY`" `h]g`ghfc]b[ `mfYWca`a`YbXYX`hUhmcI` `Wcbgi` `h`h\]g`"gh`6`":` ]a`g`k`]h`"b\_g`hc`cb`]bY`j`Yk`]b[ .`%"`6i`YbU`J`]ghU`GcW]U`7`i`V`&`"C`fZi` `BY[ fc`" `7`UdUg`BY[ fUg`7`"DYfZcf`a`UbW`F`Ygci fWg.`%";` Ub[ c\_i` ]%&!di` `gY`gYj`Yb`ghfc`\_Y`dU`H`fb`&`"Gcb`WUj`Y`" `GU`gU`("G`Ua`VU`VU`h`WUXU`)"`6U`]bYgY`[`Ua`Y`Ub.`[ ]U`\_`hcdYb[ `\*`"6U`]bYgY`[`Ua`Y`Ub.`[ ]U`\_`VUf]g`+"`Xck`b`cUXUV`Y`gWcfYg`cZ`hY`UVcj`Y`H\YfY`]g`U`@]ghYb]b[`5W]j`]hYg`gYWf]cb`]b`A ccX`Y`hUhWcbhU]bg`"]ghYb]b[ `dfUW]W`ei`]nnYg`XYg][`bYX`hc`Ugg]ghmcI` `]b`dfYdUf]b[`Zcf`hY`"ghYb]b[ `hYgHg`"McI` `UFY`YbWci`fU[`YX`hc`i`gY`h\]g`fYgci fWg`"

## F YWca a YbXYX`F Ygci fWg

GYY`hY`@Y[ Ubhc`F`YUX]b[ `@]gh]b`hY`Wci fgY`A`ccX`Y`g]h`"

## 7ci fgY`9j`U`i`Uh]cb`UbX`8Yj`Y`cda`Ybh

Gh`XYb]h\Uj`Y`hY`cddcfh`b]mhc`dfcj`]XY`Yj`U`i`Uh]`Y`ZYXVUW`\_`cb`hY`Wci fgY`hfcI [ \`I`BGK`f]7ci`fgY`UbX`HYUW]b[ `9j`U`i`Uh]cb`UbX`a`dfcj`Ya`Ybhf7`5H9`±`DfcW`gg`"Gh`XYbhZYXVUW`\_`]g`]a`dcf]Ubh]UbX`dfcj`]XYg`cbY`a`YUbg`Zcf`]a`dfcj`]b[ `hY`Wci fgY`Zcf`gi`VgYeI`YbhWc`c`f]h`"

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Hi fb]hb`Gi Va ]gg]cb

Ʒmci`YbWci`bhYf`U`dfcV`Ya`k`Yb`U`H`Ya`dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`h`fci`[`\`Hi`fb]hb`z`d`YUgY`  
H`Y`d`l`cb`Y`9I`H`f`b`U`Gi`ddcfh`cb`-`,`),`"`,`'`,`%`cf`Ya`U]`h`Ya`cb`YI`H`f`b`U`H`f`gi`ddcfh`4`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
`l`ci`fg`UfY`,`.\$`\$Ua`-`-%`\$.`\$`da`cb`k`YY`X`Umg`U`b`X`-`.\$`\$Ua`-`i`.\$`\$da`cb`k`YY`Y`b`X`g`f`l`\*)`X`Umg`U`m`Y`U`f`l`"Ʒmci`  
UfY`i`b`U`V`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`Xi`Y`hc`U`Z`U`i`h`k`]h`Hi`fb]hb`mci`a`Um`U`dd`m`i`Z`f`U`b`YI`H`f`bg]cb`z`Vi`hmc`i`  
a`i`gh`f`Y`h]b`mci`f`h]W`Y`h`bi`a`V`Y`f`Z`ca`9I`H`f`b`U`Gi`ddcfh`f`U`cb[`k`]h`U`b`m`c`h`Y`f`f`Y`Y`j`U`b`h`X`c`W`a`Y`b`h`g`l`hc`  
]b`W`i`X`Y`U`g`Y`j`]X`Y`b`W`hc`gi`ddcfh`mci`f`YI`H`f`bg]cb`U`dd`]W`h]cb"Ʒmci`Ya`U]`9I`H`f`b`U`Gi`ddcfh`mci`k`]`  
Ui`h`ca`U`h]W`m`i`f`Y`W`]j`Y`U`h]W`Y`h`bi`a`V`Y`f`z`Vi`h]Z`mci`H`Y`d`l`cb`Y`mci`k`]`b`Y`Y`X`hc`g`d`Y`W`Z]W`m`U`g`\_`Z`f`cb`Y`  
Hi`fb]hb`U`gc`d`fcj`]X`Y`g`i`d`X`U`H`Y`g`i`cb`h`Y`]f`g`m`g`h`Ya`g`h`U`h`g`i`cb`H`k`]h`Y`f`"

;`Y`b`Y`f`U`m`z`U`gg`Y`g`ga`Y`b`h`U`g`\_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`m`j`]U`Y`]h`Y`f`Hi`fb]hb`cf`U`A`cc`X`Y`  
U`gg][`ba`Y`b`h`-`b`]b`g`h`U`b`W`g`k`Y`f`Y`h`l`g`]g`b`c`h`i`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`H`X`i`cb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`  
U`h`f`b`U`h]j`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`c`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`U`gg][`ba`Y`b`h`g`i`cb`]b`Y`j`]U`A`cc`X`Y`.\`h`td`g`#`g`h`X`Y`b`h`i`bgk`"YXi`"Ui`#`ack`!  
gi`Va`]h`U`gg][`ba`Y`b`h`a`cc`X`Y`"

## 5 WUXYa ]W<c bYghmUbX 'D`U[ ]Uf]ga

D`U[ ]Uf]ga ]g'i g]b[ 'hY'k cfXg'cf]XYUg'cZchYfg'UbX'dfYgYbh]b[ 'hYa 'Ug'mci f'ck b" #WUbb'U\_Y'a Ubm Zcfa gž Zca 'XY'VYfUHY'WXUhb]b[ 'hc'UWVXYbhU`mWčdm]b[ 'Zca 'U'gci fW'k ]h'ci hUW\_bck 'YX[ Ya Ybh'

I BGK '[ fci dg'd`U[ ]Uf]ga ]bhc'hY'Zč`ck ]b[ 'WUHY[ cf]Yg.

7cdm]b[ .i g]b[ 'hY'gUa Y'cf'j Yfmg]a ]Uf'k cfXg'hc'hY'cf][ ]bU`hYI hcf'XYU'k ]h'ci hUW\_bck 'YX[ ]b[ 'hY'gci fW'cf'i g]b[ 'ei chU]cb'a Uf\_g" 'H\g'U'gc'Udd'Yg'hc' ]a U[ YgžUfhUbX'XYg][ b'dfc'YWgžUg'k Y`Ug'dfYgYbhU]cbg'k \YfY'gca YcbY'dfYgYbhg'UbchYf'g'XYUg'cf'k cfXg'k ]h'ci hWYX]h'

#Uddfcdf]UHY'dUfUd\fUg]b[ .7 \Ub[ ]b[ 'U'Zk 'k cfXg'UbX'd\UgYg'k \]Y'a cghmifYU]b]b[ 'hY'cf][ ]bU'gf'i W'fY'UbX#cf'dfc[ fYgg]cb'cZ]XYUg'cZhY'cf][ ]bU'žUbX' ]bZcfa U]cb'k ]h'ci hUW\_bck 'YX[ Ya Ybh' 'H\g'U'gc'Udd'Yg' ]b'dfYgYbhU]cbg'k \YfY'gca YcbY'dUfUd\UgYg'UbchYf'g'XYUg'cf'k cfXg'k ]h'ci hWYX]h'UbX'hc'd]YW]b[ 'hc[ YhYf'ei chYg'UbX'dUfUd\UgYg' ]bhc'U'bYk 'k \c'Yžk ]h'ci hUddfcdf]UHY'fYZfYbW]b[ "

7c`i g]cb.'k cf\_]b[ 'k ]h'chYfg'Vi hdUgg]b[ 'cZhY'k cf\_'Ug'U'dYfgcb'g' ]bX]j ]Xi U'k cf\_"7c`i g]cb'U'gc ]bWi XYg'dfcj ]X]b[ 'mci f'k cf\_'hc'UbchYf'gh'XYbhVYZc'fY'hY'Xi Y'XUHYžcf'Zc'f'hY'di fdcgY'cZhYa d`U[ ]Uf]g]b[ 'UhUbm]h]a Yž'dUm]b[ 'UbchYf'dYfgcb'hc'dYfZc'fa 'Ub'UWUXYa ]W]Ug\_žghYU' ]b[ 'cf'UWči ]f]b[ UbchYf'dYfgcb'g'UWUXYa ]Wk cf\_'UbX'Wčdm]b[ ]h'čZf]b[ 'hc'Wč'a d'Yh'UbchYf'dYfgcb'g'k cf\_'cf'gYY\_]b[ dUma YbhZc'Wč'a d'Yh]b[ 'UWUXYa ]Wk cf\_"

#Uddfcdf]UHY'W]U]cb.'7 ]h]b[ 'gci fW'g'k \]W\Uj Y'bhVYYb'fYUXžk ]h'ci hUW\_bck 'YX[ ]b[ 'hY'"gYWčbXUfm' gci fW'Zca 'k \]W'\_bck 'YX[ Y'cZhYa '\Ug'VYYb'cVU]bYX"

8i d']WU]cb'f'fY'Zd`U[ ]Uf]ga "L'gi Va ]h]b[ 'mci f'ck b'k cf\_ž]b'k \c'Y'cf' ]b'dUfřk \YfY' ]h\Ug'dfYj ]ci g'm VYYb'dfYdUfYX'cf'gi Va ]hYX'Zc'f'UbchYf'UggYgga Ybhcf'Wč'i fgY'Uhi BGK 'cf'UbchYf'i b]j Yfg]m'

7cffYW'fYZfYbW]b[ 'dfUW]W'g.

- DUfUd\Ug]b[ žgi a a Uf]g]b[ žYggUmk f]h]b[ 'UbX'h]a Y'a UbU[ Ya Ybh



## 5 WUXYa ]WbZcfa Uhcb`

: cf`YggYbh]U`ghi XYbh]bZcfa Uhcb`fY`Uh]b[ `hc.

- fYei Yghg`ZcfYI hYbg]cb/
- `UhY`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk `cZa Uf\_g/
- I B GK `<YU`h`UbX`GUZY`midc`]WYg/
- YI Ua ]bUh]cb`dfcVWXi fYg/
- gdYW]U`Vc]bg]XYfUh]cb`]b`hY`Yj Ybhcz]`bYgg`cf`a ]gUXj Ybh fY/
- ghi XYbhYei ]hmUbX`X]gUV`]`hm/
- UbX`chYf`YggYbh]U`UWUXYa ]W]bZcfa Uh]cbz`gYY

[\hfg.#k k k "Ufng"i bgk "YXi "Ui #W ffYbhghi XYbh\]bZcfa Uhcb`dfc\]Vc`g!\[ i \]XY`\]bYg#](#)

⇒ U[ Y`7 fYX]h

Gc`c`DYfZcfa UbW`A U\_]b[ `&\$%-

7F ⇒ CG

7F ⇒ CG`Dfcj ]XYf`7cXY.`\$\$\$- ;